

Military Health System



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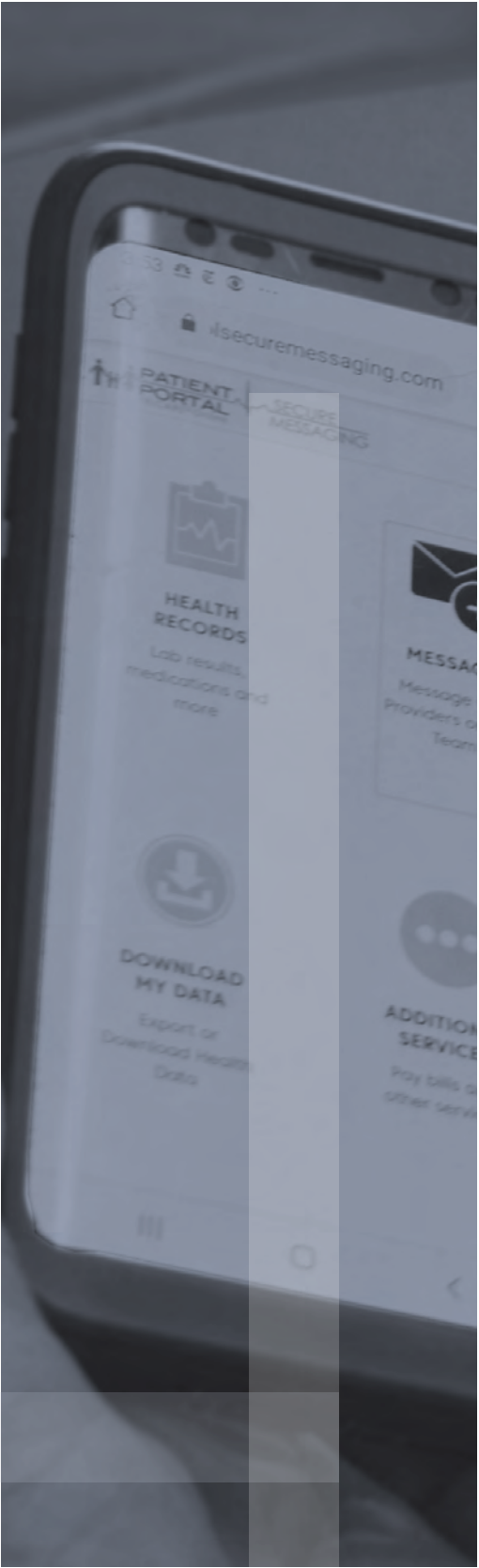
OVERVIEW

The Military Health System is a crucial element of our national defense, enabling the execution of missions of the Department of Defense, combatant commands, and operational units around the world by sustaining a medically ready force and a ready medical force. The MHS has embarked on a transformative journey, with digital health care modernization and innovation as catalysts and enablers for change.

In today's dynamic environment, where rapid access to data and seamless communication are paramount, the integration of digital health offers unprecedented opportunities to increase operational readiness, improve clinical outcomes, enhance quality and safety, reduce risks, and fortify the resilience of the total force and all DOD's 9.5 million beneficiaries.

The MHS Digital Transformation Strategy represents a commitment by the Office of the Assistant Secretary of Defense for Health Affairs to adapt and is a testament to our unwavering dedication to providing the full spectrum of care for those who serve our nation and their families. Moreover, the MHS DTS harnesses America's innate and nearly infinite capacity to innovate, enabling us to drive and master the future character of health care in an increasingly complex and perilous world.

The MHS DTS supports broad DOD strategic initiatives to improve the agility of our information infrastructure to improve the effectiveness of our national defense mission. The MHS DTS creates a unity of effort across DOD's medical capabilities in adopting digital healthcare modernization.



PURPOSE

The MHS DTS enables the overarching MHS Strategy, focusing on the role of digital health in advancing the medically ready force, the ready medical force, and improving patient care, clinical efficiency, and health outcomes. The MHS DTS sets a trajectory for progress throughout the remainder of the decade and beyond, providing input to future defense programs.

In establishing this strategic plan, we address storing data efficiently and securely; developing usable digital health tools; developing a workforce poised to capitalize on advances in health information technology; and driving governance and policies for productive, efficient, secure, and ethical data use. As we implement the strategy, we will enhance readiness, improve health outcomes, and continue to make it easier to access health care—whether our patients are in a deployed environment, in-transit, a combat surgical hospital, a stateside clinic, or in the comfort of their homes.

BACKGROUND

The 2022 *National Defense Strategy* makes clear the need for investments in data, analytics, and artificial intelligence. The national security environment which the MHS supports demands a pragmatic, ambitious digital health transformation that positions the MHS, the military departments, and the combatant commands in a dynamic, increasingly complex world.

Strategic Threats: At the heart of the National Security Strategy and NDS is that the U.S. must be prepared to fight and win wars against strategic competitors. These potential conflicts underscore the rising importance of digital transformation in all aspects of national security.

Technologies: As the threat environment continues to evolve, the role of technology assumes ever-increasing importance. Rapidly evolving health-related technologies play an increasingly central role in maintaining decision advantage and expediting critical diagnostic processes.

Cybersecurity: The escalating reliance on data—on and off the battlefield—amplifies the need for robust data management, privacy protection, and cybersecurity.

Global Health Challenges: The potential for rapid spread of pathogens and infectious diseases, coupled with rising costs of care and significant labor shortages, threaten the health of the military worldwide.

Patient Expectations: Digital tools and technologies create opportunities for a seamless patient experience, delivering care at more convenient times and places than ever before.

Guiding Strategies: The MHS DTS aligns medical capabilities to the 2023 *Data, Analytics, and Artificial Intelligence Adoption Strategy* and the 2024 *Fulcrum: Information Technology Advancement Strategy*.



MISSION

Digital transformation empowers and enables the MHS Strategy by developing, enhancing, deploying, integrating, and measuring a digital health ecosystem that delivers the joint capabilities needed to support the NDS, armed services, combatant commands, and all DOD beneficiaries.

VISION

By 2029, the MHS will be an evolved digital health system consisting of a digitally enabled ready medical force; a digitally supported research enterprise; and an infrastructure that maximizes automation, augmentation, and amplification of digital assets and capabilities; and ultimately improves health of the total force and all other DOD beneficiaries.



GUIDING PRINCIPLES

- The MHS DTS aligns to and supports the MHS Strategy, NDS, and other DOD priorities. The MHS DTS will be guided by the following set of principles:
- a. We enhance the medical readiness of warfighters, units, and leaders across the services and the combatant commands and sustain the ready medical force, including roles 1-4 capabilities.
 - b. We align with and help drive ongoing work in digital transformation across the DOD and the U.S. government, collaborating with other federal stakeholders and leveraging experiences in private sector health systems.
 - c. Digital transformation ties together and improves discipline between the various digital systems and DOD cybersecurity policies currently in use within the MHS in an overarching, integrated, and authoritative set of digital systems and policies.
 - d. We provide scalable, secure, and agile capabilities to support interoperability, integration, and data-driven decision-making and prioritize clinician and patient experience by ensuring that our digital systems are intuitive, effective, and resilient.
 - e. We provide world class education and training of digital health capabilities to leaders and healthcare staff, as well as digital health specialists.
 - f. We provide development processes and implement policies involving close collaboration with Office of the Secretary of Defense, Chief Digital and Artificial Intelligence Office, and other federal stakeholders, with particular emphasis on the Departments of Health and Human Services and Veterans Affairs.
 - g. We develop and implement new ways of delivering care and enable healthcare delivery in a way that is health-centric not billing-centric.
 - h. We integrate AI as a centerpiece of this digital strategy, resting on data that is visible, accessible, understandable, linked, trustworthy, interoperable, and secure.
 - i. We will adapt and implement DOD requirements for data ethics, data protection, and design as technology evolves.



LINES OF EFFORT

Our lines of effort are the major vectors that the MHS will follow through 2028 and beyond. While listed separately, these LOEs are interwoven, mutually supporting, and aligned with the *MHS Strategy for Fiscal Years 2024-2029*.

Each LOE outlines the desired future state and includes long-term Strategic Objectives designed to achieve the desired outcome. These strategic objectives are implemented through a series of supporting initiatives. The LOEs are:

MHS DIGITAL TRANSFORMATION LINES OF EFFORT

1

INVEST in the digital infrastructure, including cataloging, analyzing, extending, repurposing, consolidating, and enhancing current MHS, military department, and DOD digital and IT systems to improve patient care.

2

DEVELOP digital care models and empower digital self-care, including the development of models for pathways to healthcare and associated technological vectors, cybersecurity requirements, sustainment, and capabilities, including the assistance of augmented and AI as a trusted cornerstone of digital health based on human-centric design and patient empowerment.

3

DEVELOP a digitally competent medical workforce, providing a ready medical force with a culture that is primarily focused on patients and skilled in application of digital health and clinical informatics in the delivery of quality health care.

4

INTEGRATE AI and data management into the digital health ecosystem, including following the steps of use-case discovery, learning, user-centered design.



LINE OF EFFORT 1: INVEST IN THE EXISTING DIGITAL HEALTH INFRASTRUCTURE

LOE 1 will build on current and projected digital systems to generate an MHS that is equipped with integrated, reliable, secure, and accessible systems and programs that minimize clinician burden and maximize readiness and health outcomes. Accessible, well-organized, secure, and efficiently operated data resources are critical to modern military health systems. As with the broader DOD digital transformation programs and policies, the MHS will implement an “adopt, buy, create” approach to improving on extant systems and establishing new ones as discussed in the *DOD Data, Analytics, and Artificial Intelligence Adoption Strategy* adopted on June 27, 2023.

Strategic Objectives: The LOE is enabled by three strategic objectives:

Objective 1.1: Enhance efficiency and reduce redundancies within existing digital and IT health systems and identify improvements to reduce administrative burden and improve beneficiary care. MHS will critically evaluate current systems and proactively identify opportunities for improvement, ensuring the voices of patients, clinicians, and others directly impacted by these systems are heard.

Objective 1.2: Consolidate and integrate redundant digital systems to enhance interoperability, streamline care processes, and improve cost-effectiveness. Consolidating our digital systems presents opportunities to enhance the care experience, enabling better continuity of care as patients transition from a deployed environment to the home front. Further, consolidation has the potential to create long-term cost savings, both directly through reduced expenses such as licensing, maintenance, and infrastructure, and indirectly through labor efficiency, improved decision-making, and risk reduction.

Objective 1.3: Enhance the functionality and effectiveness of extant systems through incorporating advanced technologies. Infusing existing systems with promising new digital capabilities, particularly AI, serves as a cornerstone for successful digital transformation. Through technology-driven system enhancements, the MHS can unlock new levels of efficiency, effectiveness, and innovation while empowering clinicians and healthcare professionals to deliver more personalized, proactive, and high quality care.



LINE OF EFFORT 2: DEVELOP DIGITAL CARE MODELS AND EMPOWER DIGITAL SELF-CARE

LOE 2 will generate an MHS that seamlessly and safely harnesses the capabilities of new care models and technologies to support warfighter and care team readiness and empowering digital self-care.

Strategic Objectives: The LOE is enabled by five Strategic Objectives:

Objective 2.1: Establish innovative pathways that integrate technology in promoting seamless healthcare pathways to deliver care across the continuum of care (Roles 1-4). We will engage new technologies to transcend geographical barriers and promote readiness across the full spectrum of military operations, including remote monitoring of health hazards and environmental exposures.

Objective 2.2: Foster capabilities that enable a more complete view of our patients and the communities they serve. We will create a holistic view of our patients that incorporates clinical, demographic, and social determinants of health to assess overall risk and improve readiness through targeted interventions and personalized care delivery. We will emphasize data collection and leverage AI and other tools to predict future health risks, anticipate disease progression, and identify opportunities for preventative interventions for both the individual and the force.

Objective 2.3: Design and implement user-friendly digital systems prioritizing patient needs in healthcare delivery. By employing human-centered design principles, we will ensure our virtual services are tailored to meet the unique needs and preferences of our beneficiary population.

Objective 2.4: Empower patients to take an active role in managing their health and well-being through digital health interventions. By integrating innovative digital tools into our healthcare ecosystem, we will promote a culture where patients can monitor, assess, and manage their health. Through these targeted digital health interventions, we will empower patients to take a more proactive role in managing their health, enabling them to track their progress, set goals, and make informed decisions about their care: all critical factors in ensuring the medically ready force.

Objective 2.5: Foster patient experience programs to enhance understanding and confidence in using digital health tools. In implementing digital tools, we will prioritize ancillary measures to ensure these tools are accessible, credible, and secure. We will also focus on equipping patients with the knowledge and tools to understand their health data and its impact on their well-being, empowering them to make informed decisions.



LINE OF EFFORT 3: DEVELOP A DIGITALLY COMPETENT MEDICAL WORKFORCE

LOE 3 enables the MHS to build an educated, modernized, digitally competent workforce, which can effectively use digital health solutions and informatics to support force readiness and deliver exceptional outcomes throughout all roles of care.

Strategic Objectives: The LOE is enabled by four Strategic Objectives:

Objective 3.1: Enhance the ready medical force through a dynamic learning environment that promotes deep knowledge and experience in employing digital health solutions that drive exceptional outcomes. Our approach integrates traditional training methods with high-technology immersive experiences, such as augmented reality for surgical and medical training and simulation, surgical planning and navigation, patient education and engagement, remote collaboration and consultation, and operational medicine and field applications. We will also harness the power of AI to tailor training paths, ensuring personalized and effective learning experiences, and enabling our ready medical force to remain agile, proficient, and steadfastly focused on delivering exceptional outcomes to our warfighters, retirees, and their families.

Objective 3.2: Optimize clinical and non-clinical workforce in digitally-enabled care delivery and strengthen workforce competencies in accessing and applying digital health and clinical informatics. Components will identify personnel for upskilling and reskilling opportunities from the department's total force. We will enhance collaboration across our diverse workforce, ensuring that the unique contributions of both clinical and non-clinical personnel are valued and leveraged. We will equip our workforce with the necessary competencies to navigate and employ digital health technologies and clinical informatics effectively, as well to actively evaluate when and where we may effectively deploy new resources to bolster the capabilities of our existing ranks.

Objective 3.3: Promote trust and foster a human-centric culture within the workforce, targeting improved patient satisfaction. We will increase patient satisfaction, prioritizing their needs and experiences throughout their healthcare journey across the continuum of care, from Role 1 through Role 4. We will invest in initiatives that instill a shared sense of purpose and accountability amongst our personnel.

Objective 3.4: Recruit digitally native personnel from within DOD and from external sources. Even while we internally develop our digitally enabled workforce, we will also recruit personnel from across DOD and from external sources that are already trained, educated, and experienced in digital healthcare.



LINE OF EFFORT 4: INTEGRATE ARTIFICIAL INTELLIGENCE AND DATA MANAGEMENT

LOE 4 will allow the MHS to fully embrace the transformative potential of AI capabilities across the care continuum, revolutionizing the beneficiary experience by enhancing health outcomes through optimized decision-making and care management.

Strategic Objectives: The LOE is enabled by three strategic objectives:

Objective 4.1: Integrate evolving AI capabilities into prevention activities and assessments to promote health and readiness. We will leverage AI as a key partner in achieving our health objectives, providing our beneficiaries with greater insights into their own health, including individualized care reminders, development of pre-deployment and pre-combat standards of readiness, health and well-being, and instant guidance on care options.

Objective 4.2: Leverage AI for efficient case management, facilitating accurate ailment diagnosis, treatment, and follow up. Case management bridges the gap between patients and the intricate healthcare systems they navigate, ensuring individuals receive continuous, integrated care that addresses their unique needs across the continuum of care (Roles 1-4). We will leverage AI to dramatically enhance our existing case management capabilities, enabling faster and more accurate matching of patient needs to interventions, improved medication and treatment adherence, and seamless transitions throughout the roles of care via effective data and information sharing.

Objective 4.3: Implement AI decision support algorithms to enhance the accuracy of and streamline the medical board decision making process and enhance warfighter readiness. The medical board process must be streamlined, uniform, transparent, and free from bias. Sufficient data must be available to understand the entirety of the individual's health. Harnessing AI's evolving capabilities, specifically its decision support algorithms, we will elevate our existing process, increasing its efficiency and consistency while promoting fair and equitable outcomes.





IMPLEMENTATION

The implementation of the MHS DTS will be formalized in a subsequent document and will include the following:

- a. **Concept.** The success of the MHS DTS hinges on the MHS components exercising a high degree of decentralized execution and transforming legacy systems, policies, processes, and cultural norms. Decentralizing execution will allow the MHS components discretion based on their current state of technical maturity and organizational priorities to optimize how they execute the MHS DTS and achieve optimized outcomes. Each component within the MHS develops initiatives and individualized networks with associated measures of performance, timelines, and strategy-based resource requirements.

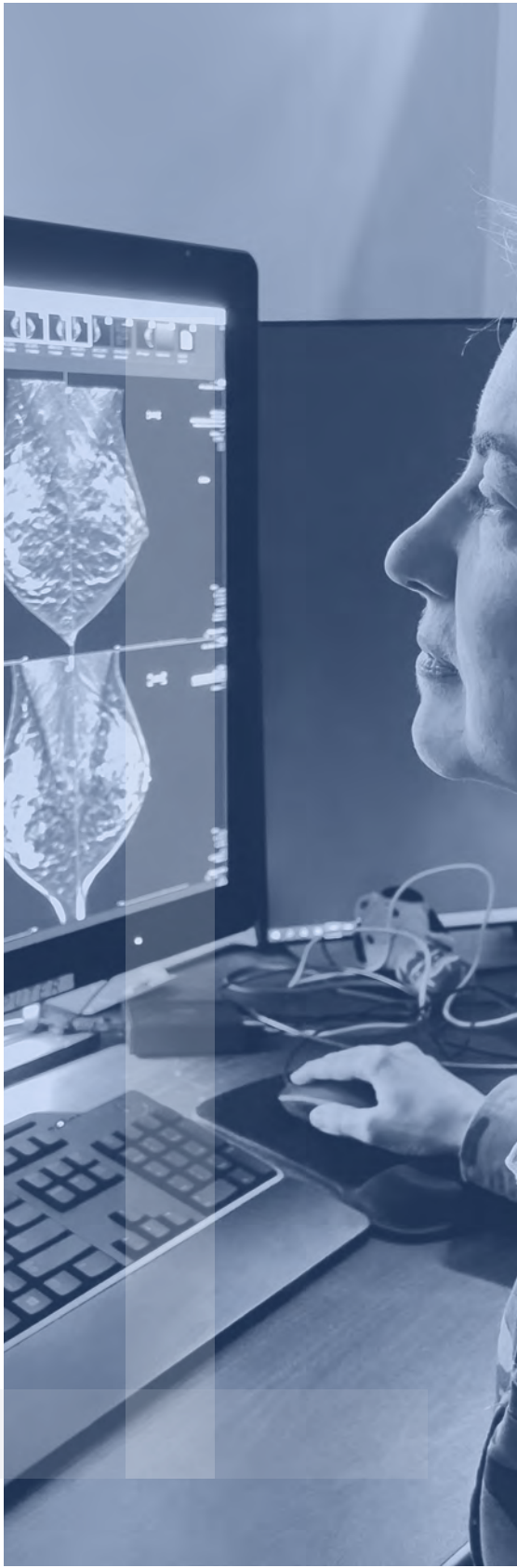
Health Affairs provides centralized policy guidance, integration functions, and resourcing strategies and decisions, maximizing synergy and minimizing duplication of effort throughout the MHS. As necessary, HA will iteratively update this strategy based upon issues such as successful completion of milestones, changes in legislation, funding, administration priorities, and/or changes in the needs of the populations MHS serves.

- b. **Responsibilities.** Overall responsibility for the MHS DTS resides with the assistant secretary of defense for health affairs. The ASD(HA) prioritizes funding, coordinates key initiatives, and is responsible to the secretary of defense for on-going reform and transformation of the MHS. The ASD(HA) establishes requirements for evaluating the success of the MHS DTS, its goals, and initiatives.

GOVERNANCE

The Chief Digital and Artificial Intelligence Office Council and OSD Chief Information Officer Organizations. The MHS DTS Governance structure will actively engage the CDAO Council and comparable organizations within the OSD CIO structure — the senior leadership groups that govern and coordinate the departments integrated data, analytics, and AI enterprise and digital transformation. When appropriate, MHS DTS governance participation in higher level digital transformation organizations will be through the Office of the Under Secretary of Defense for Personnel and Readiness.

MHS governance. MHS DTS implementation will be managed within the approved MHS governance framework and processes.



- c. **Strategic Performance Measures.** Across the LOEs, the MHS and each constituent organization and office of primary responsibility must provide rigorous, standards-based, outcomes-oriented strategic performance measures that are linked directly to strategic objectives and emphasize measurable outcomes and measures of effectiveness. These provide the means by which the ASD and each constituent leader can continuously evaluate our programs and, in turn, form the basis upon which we will improve, sustain, and adapt our programs in the future. All measures of performance and measures of effectiveness should include:

- Restatement of the strategic objective and initiative.
- Definition of the measure(s) of performance and associated metrics.
- Assignment of an office of primary responsibility and offices of coordinating responsibility.
- Establishment of timelines and milestones.
- Overall assessment for each LOE, strategic objective, and initiative.
- Measures and initiatives to be taken to reinforce strengths and redress weaknesses.
- Dependencies and relationships between component initiatives and non-MHS programs

- d. **Resourcing.** The MHS DTS provides a framework for MHS, DOD, and U.S. government leaders to understand strategy-based and prioritized requirements, and the need for supporting resources. These resource needs will provide input into the Planning, Programming, Budgeting, and Execution system.
- e. **Program Evaluation.** Program evaluation is critical to measuring the relative success and effectiveness of digital transformation. Program evaluations must be able to analyze the costs and benefits of all digital transformation initiatives in the MHS.



ANNEX A: KEY DEFINITIONS

HEALTHCARE TERMS

The healthcare terms used throughout this strategy are defined below.

TERM	DEFINITION
Care delivery	The provision of health care, including the method by which that care is provided (e.g., managed care, primary healthcare).
Clinician	A medical professional who is qualified to administer care (e.g., doctor, nurse, nurse practitioner)
Digital health	The use of data and technology to deliver health care across the care continuum
Digital patient twin	Virtual representations of patients that are generated from patient data, population data, and real-time updates from patient and environmental data, used to model implications of various care
Healthcare ecosystem	A network of all the participants of the healthcare sector, including primary and ancillary figures who might impact a patient's care or outcomes
Interoperability	The ability of different technology systems or software to connect to exchange information with each other
Medically ready force	Strong individuals able to engage in combat operations. This force meets DOD medical requirements for deployment and partners with healthcare delivery
Ready medical force	A medical force ready to deploy as part of our health support network. Operational medical forces provide three of five health capabilities: Forward resuscitative care, enroute care, and theater hospitalization. Strategic medical forces continue a cycle of medical readiness that supports health service definitive care and can include large-scale combat operations.
Role 1 (Level of Care)	Unit-level medical care received in a deployed environment (e.g., battalion aid station, ship's medical department)
Role 2 (Level of Care)	Trauma management and emergency medical treatment received in a deployed environment (e.g., expeditionary resuscitative surgical system, medical company)
Role 3 (Level of Care)	Care received at a combat surgical hospital (e.g., hospital ship, hospital center/field hospital)
Role 4 (Level of Care)	Definitive care received at Designated U.S. and overseas military medical treatment facilities, veterans' hospitals, national disaster medical system hospitals
Telemedicine	The remote diagnosis and treatment of patients
Virtual care	Care that is delivered through virtual tools and technology
Wearables	An electronic device that provides patients or providers with real-time data on certain aspects of their health care (e.g., smart watch)



PLAN TERMS

The strategic plan component terms used throughout this strategy are defined below.

TERM	DEFINITION
Goals	Communicates an organization's strategic intentions
Strategy	A plan of action designed to achieve a major aim
Objectives	Describes high-level initiatives to achieve the strategic outcome
Outcomes	Articulates the anticipated strategic goal end result
Stakeholder	A person with a key interest or concern in the outcome of the strategy
Vision	Describes the aspirational future state
Goals	Communicates an organization's strategic intentions

METHODOLOGY TERMS

The following are terms related to the methodology used to develop this strategy.

TERM	DEFINITION
Capabilities	How an organization can use resources to support and enable the achievement of a goal or objective
Human-centered design	An approach to problem solving that puts people at the core of the strategy and design process
Journeys	A visualization document that showcases the steps a user will take in a process to achieve an objective. Also called a journey map
Users	A person who participates in or uses a specific product, solution, or experience (e.g., a patient, a provider)



ACRONYMS

The following acronyms are used within this strategy.

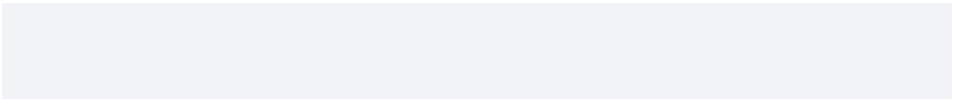
TERM	DEFINITION
AI	Artificial Intelligence
ASD(HA)	Assistant Secretary of Defense (Health Affairs)
BPR	Biodefense Posture Review
DHA	Defense Health Agency
DOD	Department of Defense
DMGC	Digital Management Governance Center
DMGS	Digital Management Governance Structure
DOTMLPF-P	Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, Policy
DTS	Digital Transformation Strategy
EHR	Electronic Health Record
ExCom	Executive Committee
FYDP	Future Years Defense Program
HHS	Department of Health and Human Services
LOE	Line of Effort
MHS	Military Health System
ML	Machine Learning
MOE	Measure of Effectiveness
MOP	Measure of Performance
MTF	Military Treatment Facility
NDS	National Defense Strategy
NMS	National Military Strategy
OPR	Office of Primary Responsibility
SMOP	Strategic Measure of Performance
US	United States
VA	Veterans Affairs

ANNEX B: REFERENCES

References considered in the development of this strategy include, but are not limited to:

- The National Security Strategy of the U.S. (2022)
- The National Defense Strategy of the U.S. (2022)
- Capstone Concept for Joint Operations Joint Force 2030, June 2019
- Deputy Secretary of Defense Memorandum, S: Stabilizing and Improving the Military Health System (2023)
- National Defense Authorization Act for Fiscal Year 2021, Section 723
- DOD 2023 Biodefense Posture Review
- JP 1, “Doctrine for the Armed Forces of the United States” (2013)
- JP 4-02, “Joint Health Services” (2018)
- DOD Instruction 1322.24, Medical Readiness Training (2018)
- DOD Instruction 6000.19, Military Medical Treatment Facility Support of Medical Readiness Skills of Health Care Providers (2020)
- DOD Biodefense Strategy (2022)
- DOD Data, Analytics and Artificial Intelligence Adoption Strategy (2023)
- DOD Data, Analytics, and Artificial Intelligence (AI) Adoption Strategy Implementation Guidance
- Fulcrum: DOD Information Technology Advancement Strategy (2024)
- Joint Medical Estimate (2023)
- Joint Warfighting Concept 3.0 (2023)
- Military Health System (MHS) Strategy (2024-2029)





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