



# DoD INSTRUCTION 6000.18

## MEDICAL MODELING AND SIMULATION

### REQUIREMENTS MANAGEMENT

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**Originating Component:** Office of the Under Secretary of Defense for Personnel and Readiness

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**Approved by:** Stephanie Barna, Performing the Duties of the Under Secretary of Defense for Personnel and Readiness

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**Purpose:** In accordance with the authority in DoD Directive (DoDD) 5124.02, this issuance:

- Establishes policy and assigns responsibilities to form and maintain a DoD capability that supports a full range of medical modeling and simulation (MM&S) for planning, decision-making, and education and training programs through Military Health System (MHS) requirement development and approval to achieve MHS standardized MM&S solution sets.
- Establishes the Defense Medical Modeling and Simulation Office (DMMSO).
- Develop a Medical Modeling and Simulation Requirements Management (MM&SRM) System.

## TABLE OF CONTENTS

SECTION 1: GENERAL ISSUANCE INFORMATION .....	3
1.1. Applicability. ....	3
1.2. Policy. ....	3
1.3. Information Collections. ....	3
SECTION 2: RESPONSIBILITIES .....	4
2.1. Under Secretary of Defense for Personnel and Readiness (USD(P&R)). ....	4
2.2. ASD(HA). ....	4
2.3. Deputy Assistant Secretary of Defense for Health Readiness Policy and Oversight. ....	4
2.4. Director, DHA.....	5
2.5. President, Uniformed Services University of the Health Sciences.....	6
2.6. USD(A&S).....	6
2.7. DoD Chief Information Officer. ....	6
2.8. Secretaries of the Military Departments. ....	7
2.9. CJCS. ....	7
2.10. Combatant Commanders.....	8
GLOSSARY .....	9
G.1. Acronyms.....	9
G.2. Definitions.....	9
REFERENCES .....	11

## **SECTION 1: GENERAL ISSUANCE INFORMATION**

**1.1. APPLICABILITY.** This issuance applies to OSD, the Military Departments, the Office of the Chairman of the Joint Chiefs of Staff (CJCS) and the Joint Staff, the Combatant Commands (CCMDs), the Office of the Inspector General of the Department of Defense, the Defense Agencies, the DoD Field Activities, and all other organizational entities within the DoD (referred to collectively in this issuance as the “DoD Components”).

**1.2. POLICY.** It is DoD policy that MM&S requirements management will be centralized, coordinated, and consolidated to:

- a. Support MHS planning, decision-making, test and evaluation, and education and training.
- b. Eliminate unnecessary duplication of costs.
- c. More effectively determine and produce the MHS mission requirements needing standardized MM&S solutions and systems.

**1.3. INFORMATION COLLECTIONS.** The Service MM&S Reports, referred to in Paragraph 2.8.c of this issuance, do not require licensing with a report control symbol in accordance with Paragraph 1.b.10 in Enclosure 3 of Volume 1 of DoD Manual 8910.01.

## SECTION 2: RESPONSIBILITIES

### 2.1. UNDER SECRETARY OF DEFENSE FOR PERSONNEL AND READINESS (USD(P&R)). The USD(P&R):

- a. Provides oversight and assigns responsibilities for MM&S education and training to DoD Components.
- b. Receives recommendations from the Assistant Secretary of Defense for Health Affairs (ASD(HA)) on policies, standards, and responsibilities in support of MM&S capabilities.
- c. Represents the DoD training community on matters of modeling and simulation (M&S), in accordance with DoD Instruction (DoDI) 5000.70, and collaborates with the Under Secretary of Defense for Acquisition and Sustainment (USD(A&S)) on DoD acquisition planning for MM&S planning, decision-making, and education and training.

### 2.2 ASD(HA). Under the authority, direction, and control of the USD(P&R), the ASD(HA):

- a. Exercises waiver authority for the provisions in this issuance.
- b. Informs the USD(P&R) on development and deployment of MM&S capabilities.
- c. Allocates funds to support the Defense Health Agency (DHA) in their role as the MHS's MM&S joint requirements synchronizer to support MHS MM&S solutions sets and standardize the MHS enterprise requirements in support of DoD MM&S planning, decision-making, and education and training, and Joint Requirements Oversight Council Memorandum 034-16.
- d. Directs all MHS stakeholders to submit MM&S related requirements, regardless of Military Service or potential funding sources, to the MMSRM system for staffing and MHS review.
- e. Provides supporting guidance to this issuance as necessary.

### 2.3. DEPUTY ASSISTANT SECRETARY OF DEFENSE FOR HEALTH READINESS POLICY AND OVERSIGHT. Under the authority, direction, and control of the ASD(HA), the Deputy Assistant Secretary of Defense for Health Readiness Policy and Oversight:

- a. Functions as the DoD proponent for MM&S policy and oversight and conducts systematic evaluation of policy content, implementation, impact, and compliance.
- b. Establishes and maintains communications with appropriate senior MHS governance to present and address policy and oversight matters related to MM&S capabilities.
- c. Coordinates with the DoD Components on policy and oversight issues related to MM&S capabilities.

d. Oversees and guides research, development, test and evaluation investments necessary to advance medical technologies and medical knowledge products to modernize MM&S capabilities.

e. Provides policy compliance oversight in coordination with the Director, DHA.

**2.4. DIRECTOR, DHA.** Under the authority, direction, and control of the USD(P&R), through the ASD(HA), the Director, DHA:

a. As the designated head of a combat support agency, supports the CCMDs, through the CJCS, and the Military Departments, on all matters related to MM&S requirements.

b. Budgets annually to implement and maintain the MHS MM&S enterprise requirements for capture, oversight, and approval to support MHS MM&S for planning, decision-making, and education and training solutions.

(1) Annually assesses the Defense Health Program funding expended on MM&S capabilities.

(2) Adjusts the MM&S budget for research and development and acquisition activities indicated by MM&SRM system management decisions.

c. Develops an MM&SRM system, procedural and technical guidance, and instructions for the DoD Components to administer MM&S in support of this issuance.

d. Establishes a DMMSO that centralizes, coordinates, and consolidates, as appropriate, the MM&S requirements that further:

(1) Defines MHS equities, develops MHS MM&S requirement documents and, with assistance from Service subject matter experts, guides documents through Joint Capabilities Integration and Development System process and selected MM&S solution sets.

(2) Improves the analytic efforts of the Military Departments, CCMDs, and the Uniformed Services University of the Health Sciences in support of MM&S for planning, decision-making, and education and training requirements.

e. Appoints a Director, DMMSO, who has the authority to communicate and collaborate with DoD elements and Service MM&S office(s) of responsibility that impact MM&S.

(1) Serves as the medical representative on the DoD M&S Steering Committee.

(2) Coordinates with the Director, DoD Modeling and Simulation Coordination Office, concerning existing MM&S capabilities, in accordance with DoDD 5000.59.

f. Coordinates with DoD Components to identify, recommend, and acquire standardized MM&S solution sets and tools for capability requirements, and support implementation of research, development, test and evaluation solutions to meet validated MHS requirements.

g. Performs an annual assessment for policy compliance, implementation challenges, and resources required. Updates the Deputy Assistant Secretary of Defense for Health Readiness Policy and Oversight on suggested process improvement initiatives to enable evaluation of this issuance.

h. Develops MM&S procedures, guidance, and standards for implementation of solutions sets in support of MHS requirements.

(1) In coordination with the DHA Chief Information Officer, is the joint requirements synchronizer to support MHS MM&S solutions sets, and standardizes the MHS enterprise requirement.

(2) The DHA Chief Information Officer has purview over the information systems and information technology (IT) and the responsibility to ensure compliance with DoDI 8500.01.

i. Develops measures of effectiveness to assess simulator or model validity and reliability.

j. Ensures existing MM&S organizations establish and maintain a list and a baseline of all of the DoD's extant MM&S capability, in conjunction with the Military Services, and centralizes MM&S acquisitions, to the extent practicable, to meet MHS requirements.

**2.5. PRESIDENT, UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES.** Under the authority, direction, and control of the ASD(HA), the President, Uniformed Services University of the Health Sciences, supports the Director, DHA, in the coordination and consolidation of analytic efforts and other operations within the DMMSO, as appropriate.

**2.6. USD(A&S).** The USD(A&S):

a. Provides a single focal point for the coordination of all matters related to the DoD M&S in accordance with DoDD 5000.59.

b. Supports the development and acquisition planning of DoD M&S capabilities in accordance with DoDI 5000.70.

**2.7. DOD CHIEF INFORMATION OFFICER.** The DoD Chief Information Officer:

a. Pursuant to DoDD 5144.02, develops DoD strategy and policy on the operation and protection of all DoD IT and information systems, including MM&S systems.

b. Develops, maintains, and manages the implementation of a sound, secure, and integrated DoD IT architecture.

(1) Ensures the interoperability of IT throughout the DoD.

(2) Prescribes IT standards, including network and cybersecurity standards that apply to MM&S systems throughout the DoD.

c. To ensure cyber vulnerabilities have been accounted for and managed to adhere to standards and adequacy of cyber defenses:

(1) In accordance with DoDI 8530.01, coordinates MM&S networking regarding computer network defense and cybersecurity requirements.

(2) In accordance with DoDI 8510.01, manages a risk management framework for DoD IT for the equipment to be purchased and configured.

**2.8. SECRETARIES OF THE MILITARY DEPARTMENTS.** The Secretaries of the Military Departments:

a. Plan, program, and budget for Service-specific MM&S capabilities to fulfill identified operational requirements.

b. Identify MM&S requirements related to their functions, roles, missions, and operations.

c. Submit Service MM&S-related requirements for MHS requirement consideration and MHS staffing and review through the MM&SRM system for documentation, information, assistance, assessment, approval, and synchronization.

d. Nominate and provide subject matter expert representation, to speak on behalf of the Service Surgeons, to the DMMSO in support of the execution of the MM&SRM System and to the DHA MM&SRM system, as required, for requirements validation and implementation efforts.

e. Support standardized and centralized acquisition of MM&S capabilities and systems in support of MHS requirements.

f. Assist the DHA in the development of procedures, guidance, and standards for implementing measures of effectiveness.

**2.9. CJCS.** The CJCS:

a. Incorporates:

(1) This issuance into relevant joint doctrine, training, and plans.

(2) MM&S information related to requirements and shared service acquisition into the Joint Capabilities Integration and Development System process, as appropriate.

(3) United States Cyber Command guidelines to ensure adherence to standards and adequacy of cyber defenses and facilitate networking and cybersecurity requirements for the

equipment to be purchased to ensure potential cyber vulnerabilities have been recognized or mitigated.

b. Updates and sustains DoD MM&S lessons learned for each CCMD, in coordination with the Military Services, DHA, and the Joint Staff J-7.

c. Facilitates communications among the operational force, combat support agencies, and the MHS on matters related to MM&S requirements.

**2.10. COMBATANT COMMANDERS.** The Combatant Commanders, through the Military Services and CJCS, will integrate MHS MM&S solution sets into planning for exercises, demonstrations, and the full range of military operations to sustain medical personnel and collective unit skill sets of the Military Services.



## GLOSSARY

### G.1. ACRONYMS.

ASD(HA)	Assistant Secretary of Defense for Health Affairs
CCMD	Combatant Command
CJCS	Chairman of the Joint Chiefs of Staff
DHA	Defense Health Agency
DMMSO	Defense Medical Modeling and Simulation Office
DoDD	DoD directive
DoDI	DoD instruction
IT	information technology
M&S	modeling and simulation
MHS	Military Health System
MM&S	medical modeling and simulation
MM&SRM	Medical Modeling and Simulation Requirements Management
USD(A&S)	Under Secretary of Defense for Acquisition and Sustainment
USD(P&R)	Under Secretary of Defense for Personnel and Readiness

**G.2. DEFINITIONS.** Unless otherwise noted, these terms and their definitions are for the purpose of this issuance.

**DMMSO.** The central MM&S office is the entry point for the MHS enterprise for MM&S requirements submission to capture, track, and determine MHS equities, and approve proposed MM&S requirements. It provides the overarching organized and coordinated capability for MM&S requirements and enterprise level oversight. The DMMSO assists Service SMEs with the development of MM&S capability requirements documents, provides guidance through Joint Capabilities Integration and Development System processes, manages the MM&SRM system for MHS enterprise approval of the requirements, and tracks, assesses, stores, and resources, as appropriate, subsequent implementation activities of selected, consistent requirement solutions.

**MM&S.** The medical discipline that comprises the development or use of medical modeling and simulations. It involves the equipment, including hardware, and the software that implements a model or simulation or an adjunct tool. The hardware or software that is either used to provide part of a simulation environment (e.g., to manage the execution of the environment) or to transform and manage data used by or produced by a model or simulation. Adjunct tools are differentiated from simulation software; they do not provide a virtual or constructive representation as part of a simulation environment. Simulation is a method for implementing a model over time.

**MM&SRM.** A system that identifies, captures, inventories, validates, develops, and maintains baseline capability requirements of MHS equities. The system identifies gaps, approved solutions, and inventories. The system develops and guides MHS requirement documents through the Joint Capabilities Integration and Development System process, including Service-specific requirements, and subsequent implementation of solution set activities, for a DoD MM&S capability.

## **REFERENCES**

- DoD Directive 5000.59, “DoD Modeling and Simulation (M&S) Management,” August 8, 2007
- DoD Directive 5124.02, “Under Secretary of Defense for Personnel and Readiness (USD(P&R)),” June 23, 2008
- DoD Directive 5144.02, “DoD Chief Information Officer (DoD CIO),” November 21, 2014, as amended
- DoD Instruction, 5000.70, “Management of DoD Modeling and Simulation (M&S) Activities,” May 10, 2012, as amended
- DoD Instruction 8500.01, “Cybersecurity,” March 14, 2014
- DoD Instruction 8510.01, “Risk Management Framework (RMF) for DoD Information Technology (IT),” March 12, 2014, as amended
- DoD Instruction 8530.01, “Cybersecurity Activities Support to DoD Information Network Operations,” July 25, 2017
- DoD Manual 8910.01, Volume 1, “DoD Information Collections Manual: Procedures for DoD Internal Information Collections,” June 30, 2014, as amended
- Joint Requirements Oversight Council Memorandum, 034-16, “Joint Medical Modeling and Simulation Requirements Management DOTmLPF-P Change Recommendation,” May 19, 2016