



DEPARTMENT OF THE NAVY
BUREAU OF MEDICINE AND SURGERY
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FALLS CHURCH, VA 22042

IN REPLY REFER TO
BUMEDINST 1543.1A
BUMED-M7
13 Mar 2015

BUMED INSTRUCTION 1543.1A

From: Chief, Bureau of Medicine and Surgery

Subj: NAVY MEDICINE MODELING AND SIMULATION MANAGEMENT

Ref: (a) DoD Instruction 1322.24 of 6 Oct 2011
(b) DoD Instruction 3216.01 of 13 Sep 2010
(c) DoD Directive 5000.59 of 8 Aug 2007
(d) SECNAVINST 5200.38A
(e) OPNAVINST 1500.84

Encl: (1) Acronyms

1. Purpose. To establish policy and guidance for Navy Medicine governing use of medical modeling and simulation (M&S) devices and technologies consistent with established Department of Defense (DoD) and Department of the Navy (DON) standards of operation, per references (a) through (e) which will enhance Navy Medicine capabilities. This instruction provides guidance on the governance process and standardization of M&S to support education and training by enhancing clinical knowledge and skill proficiency.

2. Cancellation. BUMEDINST 1543.1.

3. Applicability and Scope

a. This instruction applies to all Budget Submitting Office (BSO) 18 organizations with current or planned M&S for education and training purposes.

b. This instruction applies to Navy Medicine simulations, simulators, and models purchased, used, or developed by Navy Medicine BSO-18 activities. Models will include any physical, mathematical, or otherwise logical representation of an entity, object, person, service, or activity. Simulations include a technique for testing, analysis, or training in which real-world systems are used, or where real-world and conceptual systems are reproduced by a model, as defined in reference (c). Clinical simulation technologies include standardized patients, human patient simulators, task trainers, and computer-based and virtual reality platforms.

4. Background

a. Medical M&S devices and technologies are valuable training tools used to integrate and strengthen clinical communications, reacting to health care team crisis situations and life-saving scenarios. The use of medical M&S in education and training can enhance required skill sets

through safe, repetitive practice of critical thinking and physical skills. M&S increases participative learning, optimizes learner confidence, and provides constructive feedback, all resulting in improved patient safety. The American Board of Medical Specialties endorses the use of medical simulation to develop and hone skills effectively without putting patients at risk. Increasingly, medical specialties are requiring the use of medical simulation in maintenance of certification. Additionally, Nurse Corps competencies, provider privileges, Corpsman competencies and operational readiness training are often best accomplished with a robust incorporation of M&S in the training curriculum.

b. Reference (a) implements policy, assigns responsibilities, and prescribes procedures for developing and sustaining comprehensive systems to provide, assess, and monitor medical readiness training and medical skills training for military medical personnel deploying on military operations. It further states training of medical personnel is the foundation for effective force health protection, and programs shall include realistic individual and collective medical skills training and shall maximize the use of emerging technology, including distance learning, simulation, and virtual reality. Reference (b) states methods other than animal use and alternatives to animal use shall be considered and used whenever possible to attain the objectives of research, development, test and evaluation, or training if such alternative methods produce scientifically or educationally valid or equivalent results. Reference (c) establishes policy, assigns responsibilities, and prescribes procedures for the management of M&S. Reference (d) complies with DoD directives and provides guidance for DON management of M&S.

c. Oversight of the Navy Medicine M&S Program is provided by the various components of the management structure described within reference (e). This higher authority organizational structure consists of:

(1) The Executive Agent for M&S, Navy M&S Governance Board comprised of the following membership:

(a) Training Community, represented by United States Fleet Forces Command (USFFC).

(b) Analysis Community, represented by the Office of the Chief of Naval Operations (OPNAV) N81B.

(c) Assistant Secretary of Navy (Research, Development & Acquisition) Community, represented by RD&A's Chief Engineer.

(d) United States Marine Corps (USMC), represented by Marine Corps Combat Development Command's Senior Analyst.

(e) A cross-section from other M&S communities, as appropriate, including but not limited to: Virtual Systems Command, Total Force (OPNAV NI), Logistics (OPNAV N4), DON Comptroller, and Doctrine and Experimentation M&S, and Navy Warfare Development Command.

(2) The Navy M&S Office.

5. Policy

a. The role of medical M&S management in Navy Medicine is to support the continuum of medical education, training, and qualifications that enable health services and force health protection. Medical M&S management uses innovative, cost-effective learning solutions fully leveraging technology, partnerships, and joint initiatives. It adapts and responds quickly to validated and resourced training requirements, cultivates superior performance through a culture of excellence, communicates clearly, accurately, and openly, and employs program management principles and discipline to ensure value.

b. For the purposes of this instruction and the management of Navy Medicine M&S, medical treatment facilities (MTFs) are organized by tiered capabilities. Commands are identified as follows:

(1) Tier 1 - Identified as medical centers with multiple Graduate Medical Education (GME) programs. Tier 1 will support M&S curriculum development, resource subject matter experts for content validation, and support a full range of skills development and maintenance for multiple specialties and skill types through a robust simulation center. The simulation center will be aligned under the Director for Professional Education.

(2) Tier 2 - Identified as MTF with single GME programs. Tier 2 will support a full range of skills development and maintenance for the GME program and multiple skill types through a simulation program. The simulation program will be aligned with Staff Education and Training (SEAT).

(3) Tier 3 - Identified as MTFs without GME programs. Tier 3 will support basic life support and skills sustainment for multiple skill types. Simulation activities will be aligned under SEAT.

(4) Operational Training Commands - These commands exist within the Navy Medicine Operational Training Center (NMOTC). The capabilities will vary and are dependent on their training mission.

6. Responsibilities

a. Deputy Chief, Bureau of Medicine and Surgery Education and Training (BUMED-M7), will serve as the policy and resource sponsor for the Navy Medicine M&S Program.

b. Navy Medicine Education and Training Command (NMETC) will:

(1) Have primary oversight and execution responsibility for all Navy Medicine M&S efforts.

(2) Exercise program management oversight for the execution of M&S in education and training.

(3) Submit monthly reports following Central Simulation Committee (CSC) and Federal Medical Simulation Training Consortium (FMSTC) meetings.

(4) Establish a Navy Medicine M&S program management office (PMO). The PMO will:

(a) Advise Chief, BUMED on simulation capabilities including simulation technologies, scenarios/curriculum, and training experiences that support training requirements.

(b) Serve as the BUMED appointed representative in forums that evaluate, assess and/or coordinate simulation technology and its implementation. Report all PMO activities executed under this appointment via the NMETC chain of command.

(c) Provide programmatic management and oversight of Navy Medicine M&S to include:

1. Program planning.

2. Technological, instructional, and staffing standardization.

3. Submission of Program Objective Memorandum to BUMED-M7.

4. Acquisition process improvement.

5. Resource assessment and recommendations on distribution of assets.

6. Measures of effectiveness and return on investment indicator development and monitoring.

7. Research and development and testing and evaluation efforts on identified capability gaps.

(d) Serve as a representative or consultant with the Navy M&S Office's Governance Board.

(e) Serve as Chair, Navy Medicine CSC.

(f) In coordination with the Navy Medicine CSC, perform annual program planning; develop a shared vision statement utilizing an enterprise-wide approach for Navy M&S, generating input, a business plan, and a stakeholders report.

(g) Collaborate with USFFC, United States Pacific Fleet (PACFLT), and USMC medical M&S representatives.

(5) Establish a Navy Medicine CSC:

(a) Appoint, in writing, its voting members which will consist of:

1. Chair, Program Manager.
2. Regional Medical Director for Simulation, Navy Medicine West.
3. Regional Medical Director for Simulation, Navy Medicine East.
4. Director of Operational Medical Simulation, Navy Medicine.
5. Operational Training Center.
6. Senior Enlisted representative, NMETC.

(b) Coordinate with USFFC, PACFLT, and USMC medical representatives on the use of M&S to support operational forces.

c. The CSC will:

(1) Provide Navy Medicine with a technically and clinically educated board comprised of clinical and administrative personnel participating in the decision process to identify and introduce new M&S, evaluate cost-effective alternatives to these technologies, and determine equipment replacement cycles.

(2) Engage Corps Chiefs, specialty leaders, GME program directors, and senior enlisted hospital corps representatives to ensure M&S utilization is aligned with standards of practice and training requirements.

(3) Conduct CSC meetings at least quarterly. Proceedings will be concurrently reported through the NMETC chain of command to BUMED Education and Training, Integrated Learning Environment (M76).

(4) Report FMSTC meeting minutes.

d. Navy Medicine Regional Commanders will:

(1) Ensure distribution to and execution of this instruction by subordinate medical activities.

(2) Appoint a regional Medical Director of Simulation who will:

(a) Report to the regional commander.

(b) Be a voting member of the Navy Medicine CSC.

(c) Understand the vision of the PMO and provide input and feedback to the PMO when requested.

(d) Provide subject matter expertise, in alignment with the vision, strategy, and resources made available by the simulation PMO and NMETC, for the development and sustainment of medical/nursing/allied health simulation programs at large MTFs, family practice GME hospitals, smaller MTF's, and health clinics/dental centers within the region.

(e) Provide healthcare simulation subject matter expertise to regional executive leadership in conjunction with simulation PMO input from NMETC.

(f) Leverage regional simulation resources to serve the needs of simulation entities that need them the most (e.g., start-up simulation centers, non-permanently staffed simulation centers, and simulation centers with specific programmatic needs).

(g) Provide professional education/GME simulation expertise to Navy Medicine regions with the Accreditation Council for Graduate Medical Education (ACGME) accredited medical education programs which will be dictated by specialty-specific ACGME requirements or those requirements for other licensed independent practitioners and may also be derived from the new privileging requirements put forward by Navy Medicine.

(h) Coordinate regional M&S research efforts.

e. Commanding Officers and Officers in Charge of MTFs with GME training programs (Tier 1 and 2), will appoint a Medical Director of Simulation who will:

(1) Serve a recommended term of 3 years.

(2) Be a residency trained active duty medical officer or physician with prior military medical experience.

(3) Be responsible for oversight of all simulation related training for all residents and staff at the MTF.

(4) Encourage and promote usage of the simulation center (Tier 1)/SEAT simulation program (Tier 2/3) by direct communication with the residency program directors/department simulation champions.

(5) Be responsible for all simulation training that occurs within the MTF Simulation Center/SEAT Simulation Program.

(6) Ensure simulation curriculum development meets all required guidelines.

(7) Be a member of the Graduate Medical Executive Committee (GMEC) or equivalent committee at the MTF. The medical director is responsible for providing updates to the GMEC on their simulation center and training opportunities as well as receive guidance for potential areas where they may assist (Tier 1 and 2 only).

(8) Report to the Director of Professional Education or appropriate director as determined by the Commanding Officer at their MTF regarding all simulation training needs and requirements.

(9) Act as the MTF liaison to the command for simulation training capabilities and requirements.

(10) Consult with the Navy Medicine CSC via the Regional Medical Director for Simulation regarding strategic planning for coordination of simulation activities.

(11) Understand the vision of the PMO and provides input and feedback to the PMO when requested.

(12) Have local oversight of all simulation research executed at their MTF.

(13) Manage simulation resources to ensure alignment with tiered capability.

(14) Ensure the MTF Simulation Administrator reports all utilization, resource, and outcome metrics to the PMO.

(15) Function as the MTF lead to promote quality simulation training and expand and improve what is done at the institution with an emphasis on patient safety.

f. NMOTC will appoint a Director of Operational Medical Simulation who will:

(1) Be an O-5 Medical Service Corps/Nurse Corps/Medical Corps Officer or Civilian equivalent with operational experience. Member should preferably have medical simulation and education and training experience.

(2) Be responsible for oversight and coordination of all simulation training and research efforts within NMOTC.

(3) Act as the NMOTC subject matter expert to the Command Officer for simulation training capabilities and requirements.

(4) Be a voting member of the CSC.

(5) Consult with the Navy Medicine CSC regarding strategic planning for coordination of simulation.

(6) Ensure compliance with all governing instructions.

(7) Provide subject matter expertise for the development and sustainment of medical/nursing/allied health simulation programs throughout NMOTC and its detachments, in alignment with the vision, strategy, and resources made available by the simulation PMO.

(8) Advise on management of simulation resources to ensure alignment with tiered capability.

g. MTF's without GME programs will:

(1) Appoint a SEAT Simulation manager with a background in education and training.

(2) Ensure departmental simulation champions are identified.

(3) Ensure individual departments utilizing M&S assign a simulation champion to coordinate M&S efforts with the simulation center or program.

7. Records. Records created as a result of this instruction, regardless of media and format, shall be managed per SECNAV M-5210.1 of January 2012.

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8. Reports. The reports required in paragraphs 3 and 14 are exempt from reports control per SECNAV M-5314.1 of December 2005, Part IV, Paragraph 7k.



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ACRONYMS

ACGME	Accreditation Council for Graduate Medical Education
BSO	Budget Submitting Office
CSC	Central Simulation Committee
DoD	Department of Defense
DON	Department of the Navy
FMSTC	Federal Medical Simulation Training Consortium
GME	Graduate Medical Education
GMEC	Graduate Medical Executive Committee
M&S	Modeling and Simulation
MTF	Medical Treatment Facility
NMETC	Navy Medicine Education and Training Command
NMOTC	Navy Medicine Operational Training Center
OPNAV	Office of the Chief of Naval Operations
PACFLT	United States Pacific Fleet
PMO	Program Management Office
SEAT	Staff Education and Training
USFFC	United States Fleet Forces Command
USMC	United States Marine Corps