

**HEALTHCARE TECHNOLOGY MANAGEMENT CONTINUOUS PERFORMANCE  
MONITORING AND IMPROVEMENT**

**1. SUMMARY MAJOR CHANGES:** This directive:

a. Replaces the term “Biomedical Engineering” with “Healthcare Technology Management” throughout this directive.

b. Paragraph 2: Adds responsibilities for Chief Biomedical Engineer, Veterans Integrated Service Network.

c. Paragraph 6: Updates scorecard definition.

**2. RELATED ISSUES:** None.

**3. POLICY OWNER:** The Office of Healthcare Technology Management (19HTM) is responsible for the contents of this directive. Questions can be directed to the [VHA19HTMAction@va.gov](mailto:VHA19HTMAction@va.gov).

**4. LOCAL DOCUMENT REQUIREMENTS:** There are no local document requirements in this directive.

**5. RECISSIONS:** VHA Directive 1860, Biomedical Engineering Performance Monitoring and Improvement, dated March 22, 2019.

**6. RECERTIFICATION:** This Veterans Health Administration (VHA) directive is scheduled for recertification on or before the last working day of August 2029. This VHA directive will continue to serve as national VHA policy until it is recertified or rescinded.

**7. IMPLEMENTATION SCHEDULE:** This directive is effective upon publication.

**BY DIRECTION OF THE OFFICE OF  
THE UNDER SECRETARY FOR HEALTH:**

/s/ Alfred A. Montoya Jr., MHA, FACHE  
Acting Assistant Under Secretary for Health  
for Support

**NOTE:** All references herein to Veterans Affairs (VA) and VHA documents incorporate by reference subsequent VA and VHA documents on the same or similar subject matter.

**August 19, 2024**

**VA DIRECTIVE 1860**

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## HEALTHCARE TECHNOLOGY MANAGEMENT CONTINUOUS PERFORMANCE MONITORING AND IMPROVEMENT

### 1. POLICY

It is Veterans Health Administration (VHA) policy that each Veterans Integrated Services Network (VISN) and Department of Veterans Affairs (VA) medical facility documents Healthcare Technology Management (HTM) services; adheres to the standardized HTM business processes; and reports information that is not automatically extracted from required databases (e.g., Computerized Maintenance Management Systems), as directed by the Office of HTM and by the Assistant Under Secretary for Health for Support to ensure that secure, accessible, and innovative medical technology is used to deliver exceptional health care to Veterans. **AUTHORITY:** 38 U.S.C. § 7301(b).

### 2. RESPONSIBILITIES

a. **Under Secretary for Health.** The Under Secretary for Health is responsible for ensuring overall VHA compliance with this directive.

b. **Assistant Under Secretary for Health for Support.** The Assistant Under Secretary for Health for Support is responsible for:

(1) Supporting the Office of HTM with implementation and oversight of this directive.

(2) Ensuring support is provided for the development of mitigation or corrective actions associated with potential or experienced noncompliance with this directive.

c. **Assistant Under Secretary for Health for Operations.** The Assistant Under Secretary for Health for Operations is responsible for:

(1) Communicating the contents of this directive to each of the VISNs.

(2) Assisting VISN Directors to resolve implementation and compliance challenges in all VA medical facilities within that VISN.

(3) Providing oversight of VISNs to ensure compliance with this directive and its effectiveness.

d. **Director, Office of Healthcare Technology Management.** The Director, Office of HTM is responsible for:

(1) Establishing HTM performance monitoring benchmarks, evaluating their efficacy, (e.g., ensuring that Key Performance Indicators (KPIs) accurately capture and represent current services, current data standards, up-to-date standardized HTM business processes) and communicating these benchmarks for use in the HTM Performance Improvement and Monitoring framework to VISNs and VA medical facilities.

(2) Annually reviewing the HTM Performance Monitoring and Improvement framework, and implementing improvements recommended by VISNs and VA medical facilities. **NOTE:** See paragraph 6.c. for information about the HTM Performance and Improvement and Monitoring framework.

(3) Maintaining and developing data automation enhancements and communicating reporting deadlines (e.g., Enhanced Biomedical Engineering Resource Survey (EBERS)) to the VISNs and the VHA HTM staff.

(4) Organizing and distributing the HTM KPI scorecard to VISN Chief Biomedical Engineers to facilitate local recognition of HTM program strengths and opportunities to improve quality and outcomes. The HTM KPI scorecard is located at <https://app.powerbigov.us/groups/me/apps/88f2898f-adcf-4cba-94ad-93d1aa5bc59f/reports/2923d923-34d8-41e3-a02b-fe2c12ae7c51/ReportSection>. **NOTE:** This is an internal VA website that is not available to the public. See paragraph 7.d. for information about scorecards.

(5) Analyzing quality, outcomes, and data of the HTM scorecard across VA for trends to identify low performing or at-risk VA medical facilities. Additional resources (e.g., scorecard calculation definitions) are available at the Continuous Performance Improvement-EBERS SharePoint located at <https://dvagov.sharepoint.com/sites/VACOVHADUSHOM/HTM/CommResource/CPI-EBERS/SitePages/TrainingHome.aspx>. **NOTE:** This is an internal VA website that is not available to the public.

(6) Recommending corrective actions to the Assistant Under Secretary for Health for Support and VISN Directors for low performing or at-risk VA medical facilities.

(7) Providing consultation to VISN and VA medical facility Directors and to VISN and VA medical facility Chief Biomedical Engineers upon request.

(8) Identifying high-performing HTM programs to assess internal business processes and standardized work practices that can be shared among the VHA HTM staff as a best practice.

(9) Supporting ad hoc HTM program assessments for VISN or VA medical facility Directors upon request.

(10) Reviewing and approving any medical device security reporting requests received from other VA stakeholders (e.g., Office of Information and Technology (OIT), Electronic Health Record Modernization) beyond VHA HTM KPIs regarding networked medical devices (see paragraph 7.d.3).

(11) Escalating to other OIT stakeholders when VHA medical device security KPIs are negatively impacted due to VA network incidents or limitations.

e. **Veterans Integrated Service Network Director.** The VISN Director is responsible for:

(1) Ensuring that all VA medical facilities within the VISN comply with this directive and informing the Assistant Under Secretary for Health for Support and the Assistant Under Secretary for Health for Operations when barriers to compliance are identified.

(2) Overseeing corrective actions to address operational noncompliance with this directive at the VISN and VA medical facilities within the VISN.

(3) Relaying communications from the Director, Office of HTM to VA medical facility Directors.

(4) Reviewing and approving strategies, recommendations, processes, and programmatic strengths developed by the VISN Chief Biomedical Engineer based on performance reports.

f. **Veterans Integrated Service Network Chief Biomedical Engineer.** The VISN Chief Biomedical Engineer is responsible for:

(1) Reviewing reports and scorecards provided by the Office of HTM and developing action plans to address opportunities for improvement. **NOTE:** *Action plans do not require approval by the Director, Office of HTM; however, the HTM Program Office is available for consultation.*

(2) Reviewing data, processes, and programmatic strengths with the VISN Director; developing strategies and recommendations from the data, processes, and programmatic outcomes to improve program operations and effectiveness; upon approval by the VISN Director, communicating strategies and recommendations; and providing the HTM scorecard to the Chief Biomedical Engineers at each VA medical facility.

(3) Ensuring VA medical facility Chief Biomedical Engineers adhere to documentation of services, data, and business process standards defined by the Office of HTM for their respective HTM departments. **NOTE:** *The standard business processes are available at the HTM Field Communications and Resources SharePoint: <https://dvagov.sharepoint.com/sites/VACOVHADUSHOM/HTM/CommResource/SitePages/homepage.aspx>. This is an internal VA website that is not available to the public.*

(4) Reviewing and approving timelines to address improvements outlined in action plans developed by the VA medical facility Chief Biomedical Engineer.

(5) Conducting HTM program reviews every 2 years at a minimum for their respective VA medical facilities and presenting results to the VISN Director. **NOTE:** *Exceptions are not permitted unless extenuating circumstances are documented by the VISN Chief Biomedical Engineer. In the event an exception is needed, the VISN Chief Biomedical Engineer must submit a formal request via a memorandum through the VISN Director to the Director, Office of HTM for approval.*

(6) Communicating with clinical stakeholders about applicable program metrics.

(7) Reporting any non-HTM program office medical device security reporting requests to the HTM Program Office (see paragraph 7.d.(3)).

g. **VA Medical Facility Director.** The VA medical facility Director is responsible for:

(1) Ensuring overall VA medical facility compliance with this directive and taking corrective action if noncompliance is identified.

(2) Assigning the responsibility for adhering to national business processes to the VA medical facility Chief Biomedical Engineer (or other comparable leader, such as a Supervisory Biomedical Engineer or a Supervisory Biomedical Equipment Support Specialist, as designated by the VA medical facility Director if a Chief Biomedical Engineer is not established).

(3) Ensuring the VA medical facility Chief Biomedical Engineer has sufficient resources to fulfill the terms of this directive and to achieve successful outcomes of HTM programs within the VA medical facility.

(4) Reviewing and approving timelines to address improvements outlined in action plans developed by the VA medical facility Chief Biomedical Engineer.

(5) Supporting the VA medical facility Chief Biomedical Engineer in implementing strategies and recommendations to improve program operations and effectiveness.

h. **VA Medical Facility Chief Biomedical Engineer.** The VA medical facility Chief Biomedical Engineer (or other comparable leader, such as a Supervisory Biomedical Engineer or a Supervisory Biomedical Equipment Support Specialist, as designated by the VA medical facility Director if a Chief Biomedical Engineer is not established) is responsible for:

(1) Reviewing reports and scorecards provided by the VISN Chief Biomedical Engineer and developing action plans to address opportunities for improvement. **NOTE:** *Timelines to address improvements are outlined in the action plans and are reviewed and approved by the VA medical facility Director, VISN Chief Biomedical Engineer, and VA medical facility Chief Biomedical Engineer.*

(2) Reviewing data, processes, and program performance with the VA medical facility Director or other leaders identified by the VA medical facility Director and developing strategies and recommendations to improve program operations and effectiveness.

(3) Ensuring VA medical facility HTM staff adhere to documentation of services, data standards, and business process standards defined by the Office of HTM. **NOTE:** *The standard business processes are available at the HTM Field Communications and Resources SharePoint:*

<https://dvagov.sharepoint.com/sites/VACOVHADUSHOM/HTM/CommResource/SitePa>

[ges/homepage.aspx](#). This is an internal VA website that is not available to the public.

(4) Participating in program assessments as set by the VISN Chief Biomedical Engineer and taking any follow-up action in response to the assessment.

(5) Communicating with clinical stakeholders about applicable program metrics.

(6) Reporting any non-HTM program office medical device security reporting requests to the VISN Chief Biomedical Engineer (see paragraph 7.d.(3)).

i. **Healthcare Technology Management Staff.** HTM staff (including national, VISN, and VA medical facility level) are responsible for:

(1) Adhering to the documentation of services, data standards, and business process standards defined by the Office of HTM. **NOTE:** *The standard business processes are available at the HTM Field Communications and Resources SharePoint: <https://dvagov.sharepoint.com/sites/VACOVHADUSHOM/HTM/CommResource/SitePages/homepage.aspx>. This is an internal VA website that is not available to the public.*

(2) Verifying the accuracy of data presented in tools, dashboards, and reports developed by the Office of HTM compared to source inputs for national initiatives.

(3) Addressing potential risks identified by VA medical facility leadership (e.g., Chief Biomedical Engineer, VA medical facility Director), VISN leadership (e.g., VISN Director, VISN Chief Biomedical Engineer), or the Director, Office of HTM.

(4) Reporting any non-HTM program office medical device security reporting requests to the VA medical facility Chief Biomedical Engineer (see paragraph 7.d.(3)).

### 3. OVERSIGHT AND ACCOUNTABILITY

a. **Internal Controls.** The internal controls in this directive are:

(1) Using required databases and reporting performance information by each VISN and VA medical facility as stated in paragraph 2.

(2) Reviewing program reports and scorecards for improving quality and outcomes and addressing opportunities for improvement as stated in paragraphs 2 and 7.d.

b. **Metrics.** The metrics in this directive are the HTM Performance Monitoring and Improvement framework and scorecards that comprise KPIs and Monitors, located at <https://app.powerbigov.us/groups/me/apps/88f2898f-adcf-4cba-94ad-93d1aa5bc59f/reports/2923d923-34d8-41e3-a02b-fe2c12ae7c51/ReportSection>.

**NOTE:** *This is an internal VA website that is not available to the public.*



#### 4. TRAINING

The Office of HTM provides regular and recurring training to HTM staff. This training is **recommended**. Presentations are available at:

<https://dvagov.sharepoint.com/sites/VACOVHADUSHOM/HTM/CommResource/SitePages/homepage.aspx>. **NOTE:** *This is an internal VA website that is not available to the public.*

#### 5. RECORDS MANAGEMENT

All records regardless of format (for example, paper, electronic, electronic systems) created by this directive must be managed as required by the National Archives and Records Administration (NARA) approved records schedules found in VA Records Control Schedule 10-1. Questions regarding any aspect of records management can be addressed to the appropriate Records Officer.

#### 6. BACKGROUND

a. The Office of HTM provides oversight of Biomedical Engineering and Clinical Engineering under the umbrella of Healthcare Technology Management and the management of medical technology across VHA, consistent with relevant regulations (e.g., Public Law 101-629, 21 C.F.R Part 803), industry standards (e.g., American National Standards Institute/Association for the Advancement of Medical Instrumentation (ANSI/AAMI) EQ56, Recommended Practice for a Medical Equipment Management Program), and accreditation requirements (e.g., The Joint Commission Standard Environment of Care, National Fire Protection Association (NFPA) 99). **NOTE:** *ANSI and AAMI information is located at <https://www.ansi.org/> and at <https://www.aami.org/> respectively. NFPA 99 located at <https://www.nfpa.org/>.*

b. The Office of HTM provides oversight to HTM programs in all VISNs and VA medical facilities. The Office of HTM develops and implements standards, services, and initiatives to support HTM program operations. One such service is the HTM Performance Monitoring and Improvement framework.

c. HTM developed the HTM Performance Monitoring and Improvement framework in 2014 for organizational performance monitoring, benchmarking, and continuous program improvement. The framework incorporates dimensions of patient safety, medical device inventory, medical device security, medical device sustainment, and resources and operations. The framework tracks and trends numerous metrics related to HTM programs. By quantifying and analyzing metrics on a regular and recurring basis, HTM develops national averages for metrics, recognizes operational performance variations across VISNs and VA medical facilities, and establishes performance goals for HTM. The HTM Performance Monitoring and Improvement framework is regularly reviewed with the VHA HTM staff.

d. Consistent data and outcomes monitoring is crucial in assuring sound HTM practices. The Office of HTM establishes KPIs and Monitors through a balanced scorecard to serve as a measure of business processes and provide the VHA HTM staff with actionable data to strengthen practices to achieve program excellence. HTM has developed standard data definitions, standard business processes, universal metrics, and automated data extraction capabilities to reduce reliance upon self-reported data.

## 7. DEFINITIONS

a. **Healthcare Technology Management Performance Monitoring and Improvement Framework.** HTM Performance Monitoring and Improvement Framework is an organizational improvement model comprised of KPIs and Monitors.

b. **Key Performance Indicator.** KPI is a measure of business processes and outcomes that provide actionable data to strengthen practices and achieve program excellence. KPI results assist in monitoring health of the program; identifying high performers and those needing improvement; promoting the value of HTM; informing VHA leadership of the contribution of HTM programs to support clinical operations; and facilitating continuous program improvement, within VA medical facilities, VISNs, and the VHA enterprise. **NOTE:** *HTM KPIs are located at <https://app.powerbigov.us/groups/me/apps/88f2898f-adcf-4cba-94ad-93d1aa5bc59f/reports/2923d923-34d8-41e3-a02b-fe2c12ae7c51/ReportSection>. This is an internal VA website that is not available to the public.*

c. **Monitors.** Monitors are measures of business processes used to track and assess various aspects of HTM. These data points can help inform future KPI development and can be leading measures. They do not have associated target levels and their results do not factor into the overall composite score.

d. **Scorecard.** Scorecard is a measure of business processes and the primary reporting tool for the HTM Performance Monitoring and Improvement framework. The scorecard is comprised of the following domains and sub-categories:

(1) **Patient Safety.** Patient Safety includes alerts, recalls, incident response, investigations and determining how patient safety can be increased across the enterprise.

(2) **Medical Device Inventory.** Medical Device Inventory includes classifying and naming medical devices in accordance with a unified nomenclature.

(3) **Medical Device Security.** Medical Device Security includes a comprehensive approach to better safeguard networked medical devices and mitigate risks to patient safety and cybersecurity. **NOTE:** *Due to the unique differences between traditional Information Technology (IT) and networked medical devices, VHA HTM KPIs are the authoritative source for reporting and monitoring of VHA medical device security. Federal Information Security Management Act of 2014 reporting of IT devices and current VHA HTM KPI priorities may not align. Any additional medical device security reporting regarding networked medical devices must be vetted through the VHA HTM*

*Program Office.*

(4) **Medical Device Sustainment.** Medical Device Sustainment includes regular inspections, planned equipment maintenance, service production and outcomes.

(5) **Resources and Operations.** Resources and Operations includes professional technology assessment, deployment, and implementation services, conformance to business process standards, staff knowledge, customer satisfaction, and other monitors related to operational excellence.

## 8. REFERENCES

a. P.L. 101-629.

b. 38 U.S.C. § 7301(b).

c. 21 C.F.R Part 803.

d. Continuous Performance Improvement-EBERS, located at:

<https://dvagov.sharepoint.com/sites/VACOVHADUSHOM/HTM/CommResource/CPI-EBERS/SitePages/TrainingHome.aspx>. **NOTE:** *This is an internal VA website that is not available to the public.*

e. HTM Scorecards located at [https://app.powerbigov.us/groups/me/apps/88f2898f-adcf-4cba-94ad-93d1aa5bc59f/reports/2923d923-34d8-41e3-a02b-](https://app.powerbigov.us/groups/me/apps/88f2898f-adcf-4cba-94ad-93d1aa5bc59f/reports/2923d923-34d8-41e3-a02b-fe2c12ae7c51/ReportSection)

[fe2c12ae7c51/ReportSection](https://app.powerbigov.us/groups/me/apps/88f2898f-adcf-4cba-94ad-93d1aa5bc59f/reports/2923d923-34d8-41e3-a02b-fe2c12ae7c51/ReportSection). **NOTE:** *This is an internal VA website that is not available to the public.*

f. HTM Program Field Communications and Resources, located at:

<https://dvagov.sharepoint.com/sites/VACOVHADUSHOM/HTM/CommResource/SitePages/homepage.aspx>. **NOTE:** *This is an internal VA website that is not available to the public.*

g. American National Standards Institute, located at <https://www.ansi.org>.

h. Association for the Advancement of Medical Instrumentation, located at <https://www.aami.org/>.

i. Federal Information Security Management Act of 2014.

j. National Fire Protection Association 99 located at <https://www.nfpa.org/>.