

2026
DEFENSE HEALTH INFORMATION
TECHNOLOGY SYMPOSIUM

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HYATT REGENCY NEW ORLEANS
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Unifying Medical Device Integration Support within DHNs to Enhance Readiness

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Agenda

- 1** Panel Member Introduction
- 2** Organizational Overviews
- 3** Panel Discussion
- 4** Panel Member's Contact information

Speaker Introduction

Chief of Laboratory Operations and Air Force Director, Center for Laboratory Medicine Services



Dr. Saad Khan

Chief, Medical Device
Integration Branch,
Health Informatics
and Digital
Integration, OWHA



Col W. Gunnar Conrow

Commanding Officer
Grand Forks MDG
Fmr. Chief of Lab
Operations CLMS



James Vaughn

Chief Health
Informatics Officer
DHN Indo-Pacific



Jodie O'Neil

Deputy Chief
Health Informatics
Officer DHN Central

Learning Objectives

- 1** Identify how MDI enhances clinical decision-making, patient safety, operational readiness, and mission success across the care continuum, making it a critical enabler of efficiency and enhancement in cross-domain medicine.
- 2** Become aware of current Military Health System (MHS) efforts and best practices for sustainment, and support models that are essential for garrison and operational environments.
- 3** Follow the guidance to implement the MDI Network support models and how to request that program reviews be conducted for your DHN.

Medical Device Integration Office

MDI Branch Chief, Dr. Saad Khan

MDIO Alignment with Defense Health Agency Priorities



Deliver Warfighter Medical Readiness

Manages 12,500+ interfaced medical devices across 140+ Military Treatment Facilities (MTF) that provide medical screening, diagnosis, and treatment required to ensure medical readiness of the individual warrior



Deliver Medical Warrior Currency

Executes the medical device integration education program for MDI support teams totaling 550+ personnel at 140+ MTFs to maintain the interfaced medical devices that produce diagnostic information used to maintain Warfighter Medical Readiness



Deliver Joint Warfighting Capabilities

Conducts Tier 2 MDI issue resolution support captured by over 3,400 tickets annually ensuring the uptime and regulatory compliance of MDI capabilities needed to meet the mission of the DHNs/s.



Deliver the Healthcare Enterprise Beneficiaries Deserve

Champions over 12 new medical device related capabilities that are intended to streamline workflow, reduce probability of human error and support better outcomes for beneficiaries and Department of War (DOW) warfighter personnel.

MDIO Core Services

1

MDI Sustainment Support

Tier 0/2 MDI Issue Resolution, MDI Relocation/Transition Support, Periodic MDI Reviews

2

New Device Integration Support

EHR Compatibility Guidance, Cybersecurity Support

3

MDI Operations Support

MDI Knowledge Management, MDI Consultative Services, MDI Communication Strategy, MDI Analytics, Site Assessments

4

New MDI Capability Support

MDI Requirements Translation (clinical -> technical), Solution Pre-Deployment Risk Assessment

5

MDI Education & Training

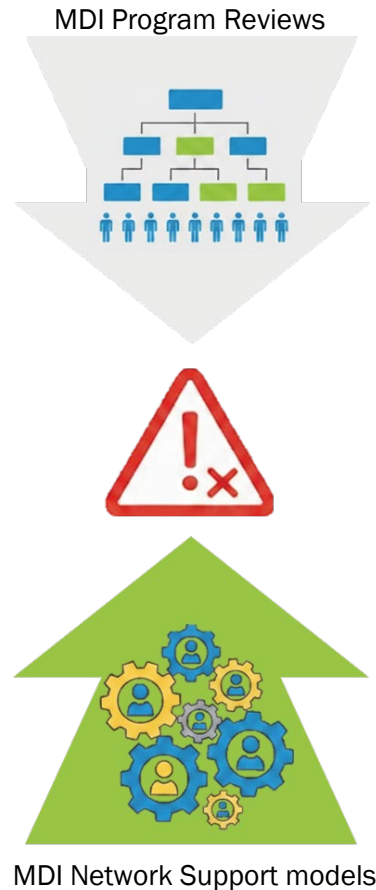
Tier 0 MDI Support Training/Certificate Programs (MDI Fundamentals, Basic MDI, L&D MDI, Anesthesia MDI, Advanced MDI, Patient-to-Device Association),

What is the Problem



Support for integrated medical devices and laboratory instruments is a perishable skill and inconsistent at s causing preventable disruptions to the delivery of patient care

What is the Solution



MDI Program Reviews and MDI Network Support models develop the capacity to minimize these preventable issues at the site level

Overview: MDI Network Support Program (1 of 3)

The Problem: Improper Ticket Escalation and Knowledge/Skill Retention

The MDI Network Support program addresses the critical inefficiency of medical device technical support tickets bypassing local resolution.

- **Skipping Local Support:** End-users at MTF(s) frequently bypass their capable local Tier 0 support teams and escalate issues directly to the Tier 1 MHS Service Help Desk.
- **Inefficient Routing:** Once at Tier 1, help desk protocols often incorrectly route these localized tickets straight to Tier 2 or higher enterprise-level support.
- **Root Causes:** This systemic failure is driven by a lack of role awareness among both clinical and IT staff, compounded by flawed routing procedures at the initial help desk level.

Overview: MDI Network Support Program (2 of 3)

The Impact: Operational Bottlenecks and Device Downtime

This flawed escalation process creates significant operational inefficiencies that ultimately degrade healthcare delivery and patient care.

- **Ticket "Bouncing":** Because tickets are sent to the wrong support level, they frequently bounce between enterprise tiers for weeks before finally returning to the correct local office.
- **Substantial Delays:** The time required to resolve standard MDI-related issues is artificially inflated, extending resolution times from what should be hours to days or even months.
- **Resource Misallocation:** Extended medical device downtime directly impacts patient care while simultaneously overburdening enterprise teams and underutilizing the skills of trained local technicians.

Overview: MDI Network Support Program (3 of 3)

The Solution: Collaborative MDI Tier 0 within a DHN Region

The MDI Network Contingency Support program implements a robust, regionalized Tier 0 support model to ensure rapid, localized problem resolution.

- **Regional Networking:** s are organized into a shared, collaborative network based on geographic proximity and time zones to maximize local resources.
- **Designated "Hub" Sites:** Specific facilities act as subject matter expert "hubs," providing remote support to sister facilities to cover personnel absences or knowledge gaps.
- **Optimized Tiers:** By strengthening the Tier 0 channel for rapid local resolution, the system effectively reserves enterprise-level Tier 2 support exclusively for genuinely complex issues.

Overview: LMDI Program Review (1 of 3)

The Problem: Laboratory Medical Devices not Interfaced with MHS GENESIS and PathNet Workstream Issues

LMDI Program Reviews address instruments not interfaced with MHS GENESIS, PathNet file and table build discrepancies impacting result reporting, and workstream inefficiencies impeding a seamless effort with the management of specimen testing.

- **Incomplete Instrument Integration at MHS GENESIS Go-Live:** Instruments that had PathNet file and table builds completed but were not connected to the network and interfaced prior to Wave MHS GENESIS Go-Live resulting in manual entry of results into PathNet by the lab.
- **PathNet File and Table Build Discrepancies:** PathNet file and table builds were inaccurate or not fully completed to accurately reflect desired reporting end state.
- **Workstream Inefficiencies Involving Specimen Testing:** Service resources for obsolete instrumentation not inactivated creating errors with routing and reporting. PathNet management tools not acquired to assist with patient testing, peripheral device troubleshooting and quality management activities.
- **Root Causes:** Integration resourcing gaps at Go-Live; inaccurate interpretation or incomplete DCWs; tickets not submitted for known PathNet issues; submitted tickets not resolved; lack of knowledge or understanding of capabilities and efforts to improve workstream efficiency.

Overview: LMDI Program Review (2 of 3)

The Impact: Degradation in Patient Safety, Operational Efficiency, and Regulatory Compliance

Lack of medical device integration creates an environment where the laboratory operates in a manual, disconnected state. This separation introduces significant risk to patient safety, operational efficiency and regulatory compliance. Inaccurate PathNet builds and workstream inefficiencies compliments this risk to the clinical community and patient.

- **Patient Safety:** Transcription errors with entering results into PathNet. Patient misidentification involving barcode-driven device integration (no automated validation matching the specimen to the patient record). Delayed critical alerts due to manual identification and reporting. Delayed specimen processing due to errant routing configurations.
- **Operational Efficiency:** Lab technicians spend significant portions of their time performing manual entry. Turnaround times from specimen collection to result availability increases exponentially due to manual processing. Duplicate testing due to loss or delay in manual results entered in the EHR
- **Regulatory Compliance:** Strict standards involving data integrity, specimen tracking, and result reporting.

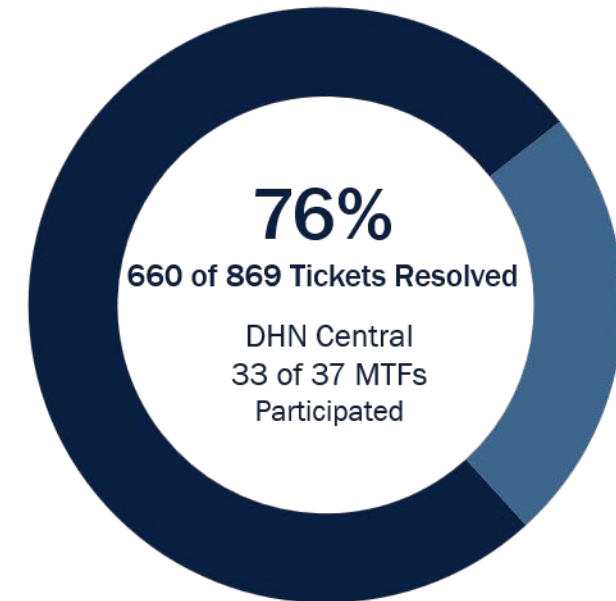
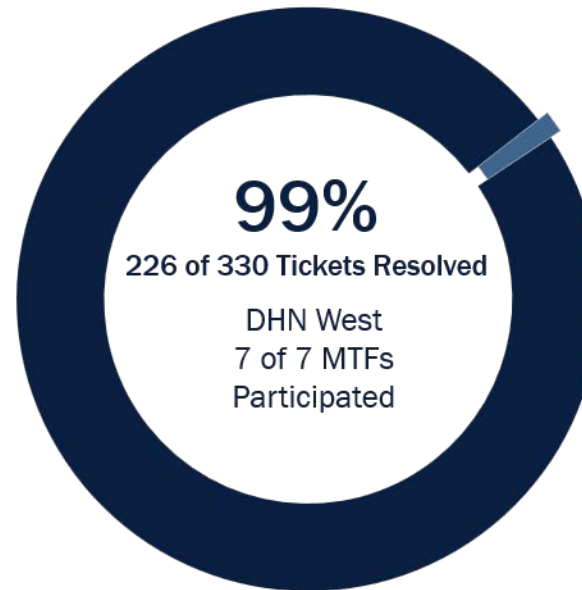
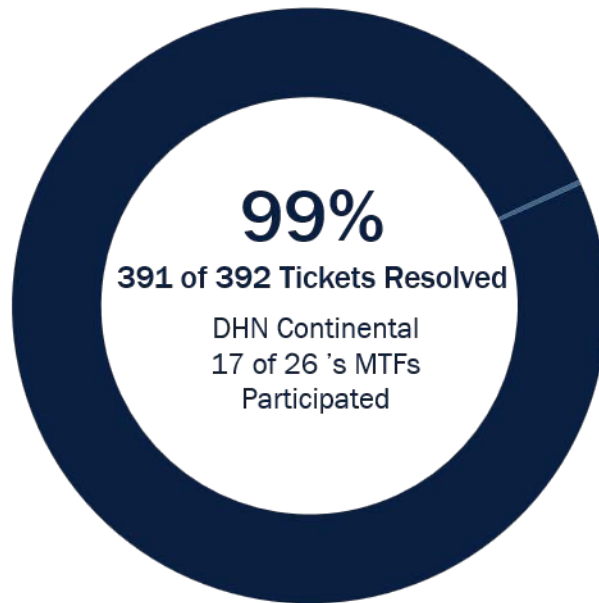
Overview: LMDI Program Review (3 of 3)

The Solution: Proactive Engagement and Outreach to Assess LMDI and PathNet Operational Posture

LMDI Program Reviews assess the operational posture as it relates to the successful integration of laboratory instruments to MHS GENESIS and the functionality of the PathNet build that supports the lab testing menu. Target critical laboratory workflow processes to synchronize efficiency of instrument integration and PathNet reporting.

- **Patient Safety and Clinical Quality:** Reduce/eliminate transcription errors and PSRs. Return valuable time back to the impacted clinical community. Eliminate workflow deviations from Standard Operating Procedures due to integration issues. Meet stringent accreditation requirements (CAP, TJC, FDA, AABB).
- **Operational Readiness:** Reliable medical device to EHR data flow supports seamless testing throughput impacting force readiness by reducing redundancies, improving turnaround times, and enhancing data reporting.
- **Networking and Knowledge Sharing:** Provide guidance and resources to assist laboratories acquire timely support from the MDI Branch.

DHN Program Review Issue Discovery/Resolution Summary



Tickets Resolved



Tickets Pending Resolution

Total Tickets for 3 DHNs: 1,591
Total Tickets Resolved: 1,486 (93.4%)

Program Review Issue Discovery - Workstreams

	DHN Continental		DHN West		DHN Central	
Laboratory Workflow Category	Ticket Volume	% Ticket Volume	Ticket Volume	% Ticket Volume	Ticket Volume	% Ticket Volume
Service Resource Inactivation	172	43.9%	156	47.3%	437	50.3%
PathNet File Table/Table Build Corrections	119	30.4%	107	32.5%	203	23.4%
New LMDI Projects	52 (13 Devices)	13.3%	40 (10 Devices)	12.1%	112 (28 Devices)	12.9%
New Accounts (GL Default, Service Resource, etc.)	15	3.8%	7	2.1%	34	3.9%
Peripheral Device Connection/Configuration	12	3.1%	7	2.1%	21	2.4%
iCommand Configuration/Account	13	3.3%	6	1.8%	29	3.3%
LMDI Network Connectivity Issue	5	1.2%	5	1.5%	22	2.5%
TAT Monitor	4	1.0%	2	0.6%	11	1.3%
Total Ticket Volume	392		330		869	

Center for Laboratory Medicine Services

Former Lab Operations Chief, Col W. Gunnar Conrow



The Center for Laboratory Medicine Services

Responsibilities:

- Statutory enforcement of DoWM6440.02 (CFR42 Section 1403/Clinical Laboratory Improvement Act) for all MHS laboratories both in-garrison and deployed
- Provides oversight and approval of the Clinical Laboratory Improvement Program (CLIP) application/certification process for all DOW sites seeking to conduct clinical testing regardless of platform and operational status
- Lead for optimization efforts and laboratory policies for DHA laboratories
- Statutory and operational control encompasses both clinical laboratory and anatomic pathology disciplines

The CLMS

DOW CLIP Registered Laboratory Testing Sites

SERVICE	DHN	OTHER	DEPLOYED	FLEET	TOTAL
Air Force	73	16	5		94
Army	64	94	8		166
Joint/CSA	2	2	1		5
Navy	76	21	3	252	352
TOTAL	215	133	17	252	617

The CLMS

- Top 3 Priorities
 - Prompt integration of laboratory devices to reduce downtime/manual entry
 - Accurate and efficient workflows
 - Reduce variation
- Top 3 Pain Points
 - FY2022: Insufficient integration resources, over 180 devices in the queue, 1-1.5 year backlog
 - ATO process
 - Lack of local site engagement
- Opportunities
 - Collaborative acquisition, integration, and cyber-security process
 - Functional community, Logistics, Cyber-Log, Contracting, DHA HI/MDIO
 - Pre-deployment vetting and integration for downrange devices

Defense Health Network Central

Deputy CHIO – Jodie O’Neil

DHN Central (1 of 2)

- 31 Health clinics and 8 Medical centers
- 6 OCONUS MTFs
- Top 3 Priorities
 - Readiness
 - AD Access-to-care
 - High-quality care
- Top 3 CHIO Pain Points
 - PCS season
 - Outdated ISC Leads Roster
 - Coordination between clinical departments, BMET and IT departments

Defense Health Network Indo-Pacific CHIO – James Vaughn

DHN Central (2 of 2)

- 5 Health clinics and 2 Medical centers
- 5 OCONUS MTFs
- Top MDI Priorities
 - Impact to warfighter in achieving readiness; reduce work demand on active-duty personnel outside operational duties and ensure work supports main objective of readiness.
 - Life Cycle management of medical devices and utilization the devices.
- Top 3 CHIO Pain Points
 - Challenges with ATO process and managing medical devices with desire leverage work already done by other organizations to include VA.
 - Unknowns
 - Governance of MDI issues

Contact

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Thank You!



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