Medical INFORMATICS®

Sickbay Unifies Patient Monitoring

Targeted insights from the world's largest physiologic data sets

The unique value Sickbay provides

Sickbay is the ONLY solution in the market that **collects, consolidates, & persists second-by-second data** from medical devices, the EHR, and cameras that drive the following:

1. Scale to support some of the largest physiological databases on the planet

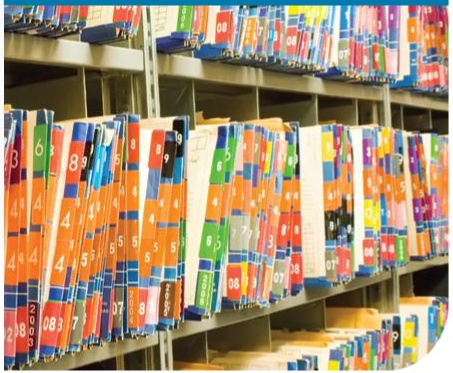
2. Sickbay generates **INSTANTLY USABLE *big data*** for analytics & supports health system AI strategies to learn from this novel dataset

Sickbay drives efficiency & analytics to support improvements in care, innovation, and revenue

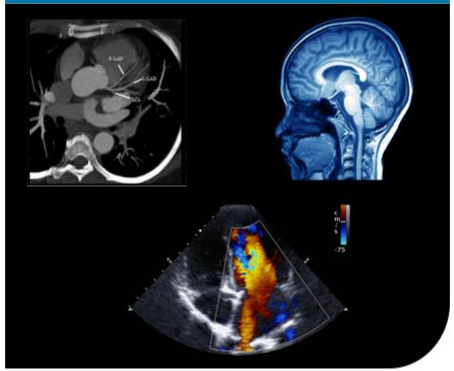
Sickbay fills a foundational gap in delivering near real-time, physiologic data across a health system

Point-in-time
representation of a patient's status
collected & entered into the EHR

EHRs Manage Patient Records



PACs Manage Imaging Data



Second-by-second
persisted & integrated data across all patient encounters

Sickbay Manages Patient Monitoring Data

Most comprehensive physiologic datasets in the world

Collecting data across a health system positions them to own a dataset that exactly matches their patient population

Vendor Neutral

Passively recording over all beds

Integrates with thousands of devices so that you have the most complete picture of patient status

Automatically time-synchronizes data at recording

Accessible

Efficient compression enables low storage overhead and on-demand access across years of recordings

Data accessible via app, API, and ETL to suit individual clinical, quality, research team needs

Last-mile of data delivery for critical workflows, ensuring uptime and data availability

Frictionless

FDA-cleared for near real-time monitoring and alarm distribution

Batch data is self-service and on-demand

Unlimited users

Many available visualizations and toolkits

100+ Publications, Posters, Presentations, **$10M** in Grant Funding
Researchers publish **more often**, with **more citations per paper**, than comparable platforms

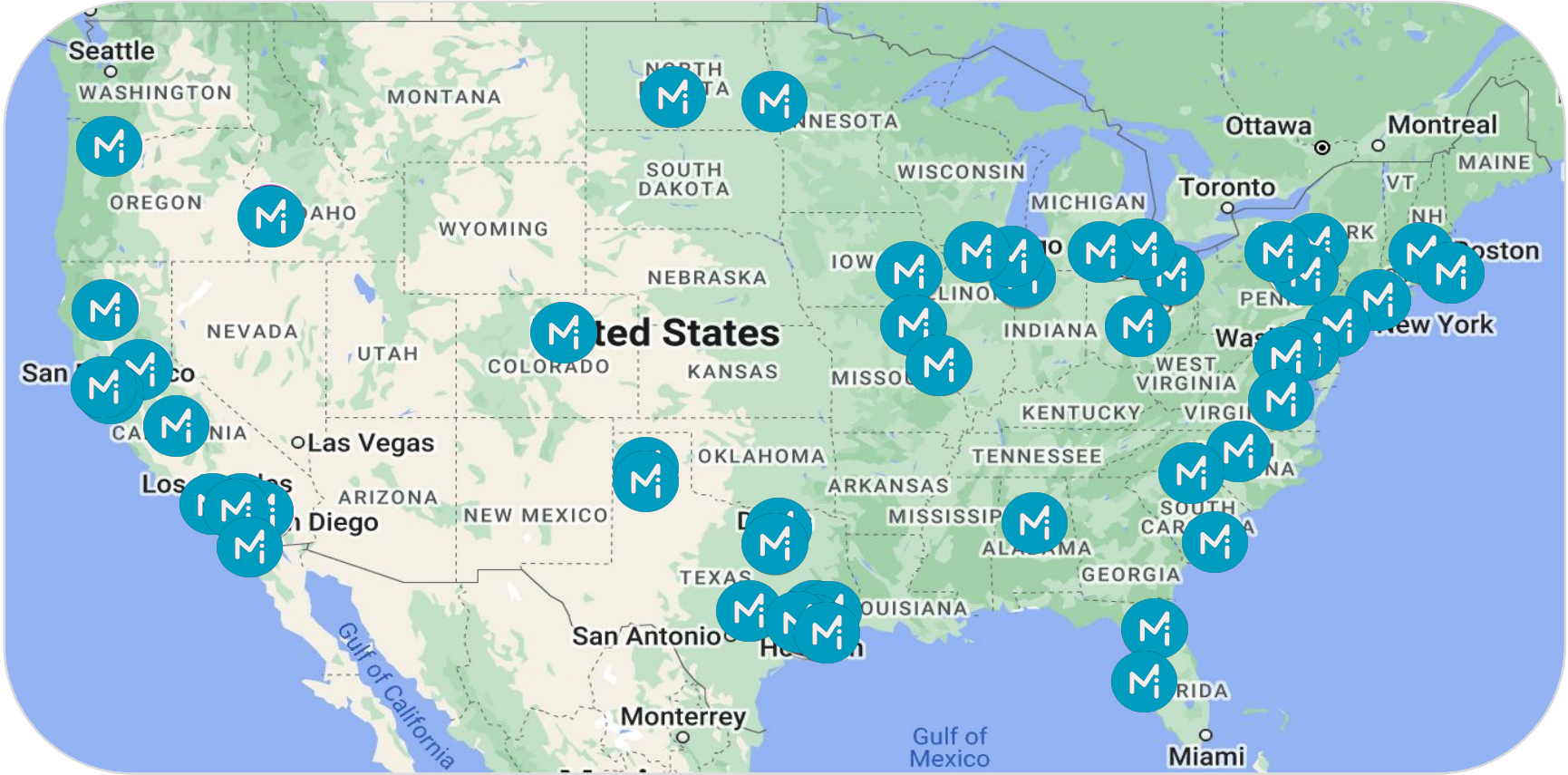
Sickbay consolidates & presents critical monitoring data in a single shareable interface optimized for each user

Technologies	Patient Monitoring Data
Device — EEG, NIRS, CARDIAC, VENT, OTHER DEVICES	Physiological waveform data (EEG, ICP, HR, BP, O_2, etc.)
EHR — MEDS & LABS, ICD10CM, STAFFING, OBSERVATIONS	Historical data (meds, labs); Observations; Staffing assignment information
Camera — VIDEO	Video recording; Communication with in-room staff
Analytics & Algorithms — ANALYTIC	*Calculated* risk measurement data (stroke, cardiac arrest, etc.)

Sickbay

Second-by-second centralized, persisted, and integrated monitoring data from admit to discharge

Sickbay is a mature platform in use throughout the United States



Sickbay is an award-winning clinical platform

37% Reduction in overnight Code Blues
(prevent unnecessary trauma)

$7M Savings in virtual care model
(material savings from improved staff ratio & efficiency)

"...what we really should be talking about is the 30 minutes to 2 hours before the bad event happened...there's always a missed signal or decision point..."
(unlimited data access drives second-by-second understanding)

"...my first night in the vICU as a vMD...I had all the data and I was able to help out the bedside team on an emergent procedure"
(drive effective virtual care)

"...reviewing events has gone from 2 days to 2 hours"
(unlimited data history drives revenue cycle efficiency)

"...out of the 1,000 vendors we have, MIC is the most responsive, most proactive"
(world-class customer support)

TIME
World's Top HealthTech Companies of 2025

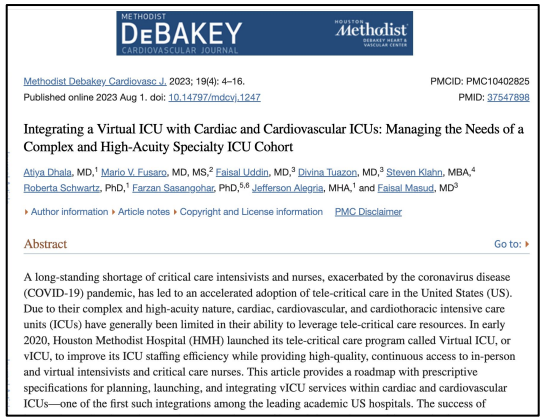
Newsweek
World's Best Digital Health Companies of 2024

Client testimonials are unedited, unpaid, and reflect the real-life experiences and opinions of our clients. Individual results may vary, and we make no guarantees about the outcome of our services for any particular use case.

Advancing Evidence-Based Medicine with Sickbay

Click each image below to access the document PDF.

37% reduction in overnight Code Blue events
24% reduction in unneeded ICU up-transfer



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Integrating a Virtual ICU with Cardiac and Cardiovascular ICUs: Managing the Needs of a Complex and High-Acuity Specialty ICU Cohort

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Abstract Go to:

A long-standing shortage of critical care intensivists and nurses, exacerbated by the coronavirus disease (COVID-19) pandemic, has led to an accelerated adoption of tele-critical care in the United States (US). Due to their complex and high-acuity nature, cardiac, cardiovascular, and cardiothoracic intensive care units (ICUs) have generally been limited in their ability to leverage tele-critical care resources. In early 2020, Houston Methodist Hospital (HMH) launched its tele-critical care program called Virtual ICU, or vICU, to improve its ICU staffing efficiency while providing high-quality, continuous access to in-person and virtual intensivists and critical care nurses. This article provides a roadmap with prescriptive specifications for planning, launching, and integrating vICU services within cardiac and cardiovascular ICUs—one of the first such integrations among the leading academic US hospitals. The success of

100% reduction of Travel Nurses*
50% reduction in turnover rates*

GUTHRIE

How **Guthrie Clinic** resolved its nursing shortage, boosted patient satisfaction and netted savings

Integrating virtual nursing into its delivery model helped Guthrie Clinic transform a staffing challenge into an opportunity to innovate, optimize resources and improve care.

OVERVIEW

In April 2022, Guthrie Clinic launched its Pulse Center, a remote-patient monitoring hub that enabled it to onboard experienced nursing staff and eliminate its reliance on travel

10,000-square-mile region across Pennsylvania and upstate New York, was no exception. Its clinical workforce plunged by 43% between April 2022 and April 2023, going from 172 full-time equivalents (FTEs) to 98 with many nurses leaving for traveling roles. With patients waiting for intensive care unit (ICU) beds and burnout rising among remaining staff, Guthrie leaders needed to reevaluate how to support both patients and caregivers.

MAKING THE BUSINESS CASE

Seeking to standardize care delivery, nurse leaders analyzed systemwide lab and patient safety reports to optimize workflows and streamline processes. They found that by implementing a virtual care model, they could minimize inefficiencies, ensure more timely product deliveries and simplify time-consuming processes like data documentation.

After analyzing costs, staffing needs and tech options, Guthrie's nursing leaders proposed a centralized command center, consolidating on-site staff and hiring experienced virtual

45% reduction in alarms
60% reduction in time in alarm

Utilizing Data and Alarm Champions to Enhance Alarm Management

A Pediatric Quality Improvement Initiative

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ABSTRACT

Background: Nuisance and false alarms distract clinicians from urgent alerts, raising patient safety risks.
Local Problem: High alarm rates in a pediatric progressive care unit resulted in experiencing 180-250 alarms per day or 1 alarm every 3 to 4 minutes per clinician.
Methods: Through Plan-Do-Study-Act cycles, environmental, policy, and technology changes were implemented to decrease the average alarms/day/bed and percentage of time in alarm.
Interventions: Alarm settings tailored to patient needs using features embedded within the patient monitoring system were implemented and monitored with the assistance of alarm champions.
Results: The average number of alarms/day/bed decreased from 177.69 to 96.94 over the course of 10 years, a 45.45% reduction. The percentage of time in alarm decreased from 7.52% to 2.83%, a 62.37% reduction.
Conclusions: Arming clinicians with technology to analyze real-time clinical data made alarms meaningful and actionable, decreasing false alarms without compromising patient safety.
Keywords: alarm, alarm management, analytics, critical care, false alarms, nuisance alarms, paediatrics, patient safety, rapid cycle improvement, technology

** As part of an institution-established, multi-vendor virtual nursing program*

Repeatedly apply large-scale datasets to solve a myriad of challenges

Vision: A world where no critical signal is ever missed

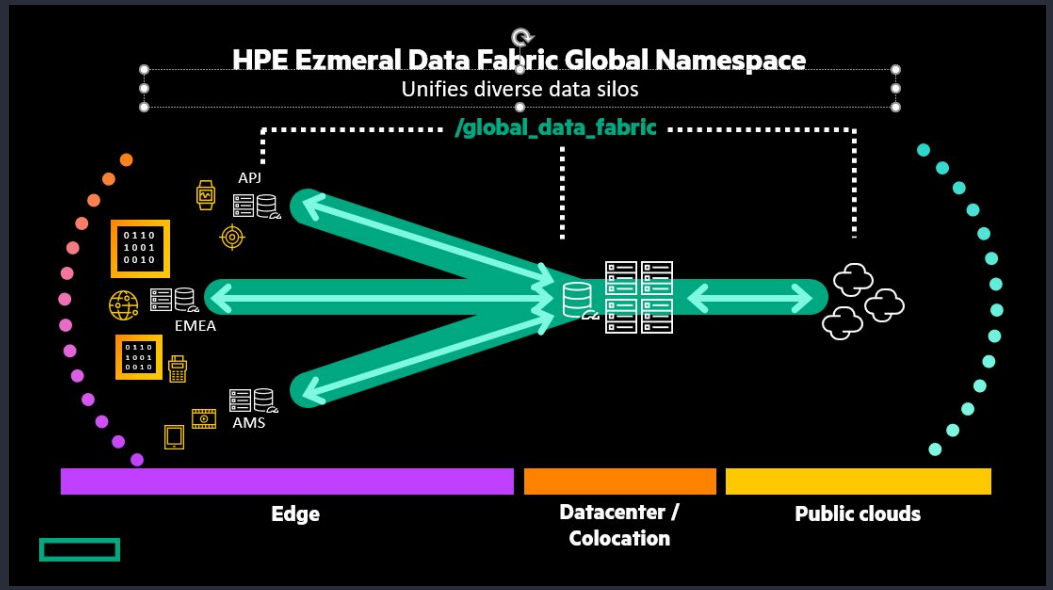
HPE + MIC = Transforming the future of patient care

Proactive care: Early warnings = fewer emergencies

Remote monitoring: Enables virtual ICUs and command centers

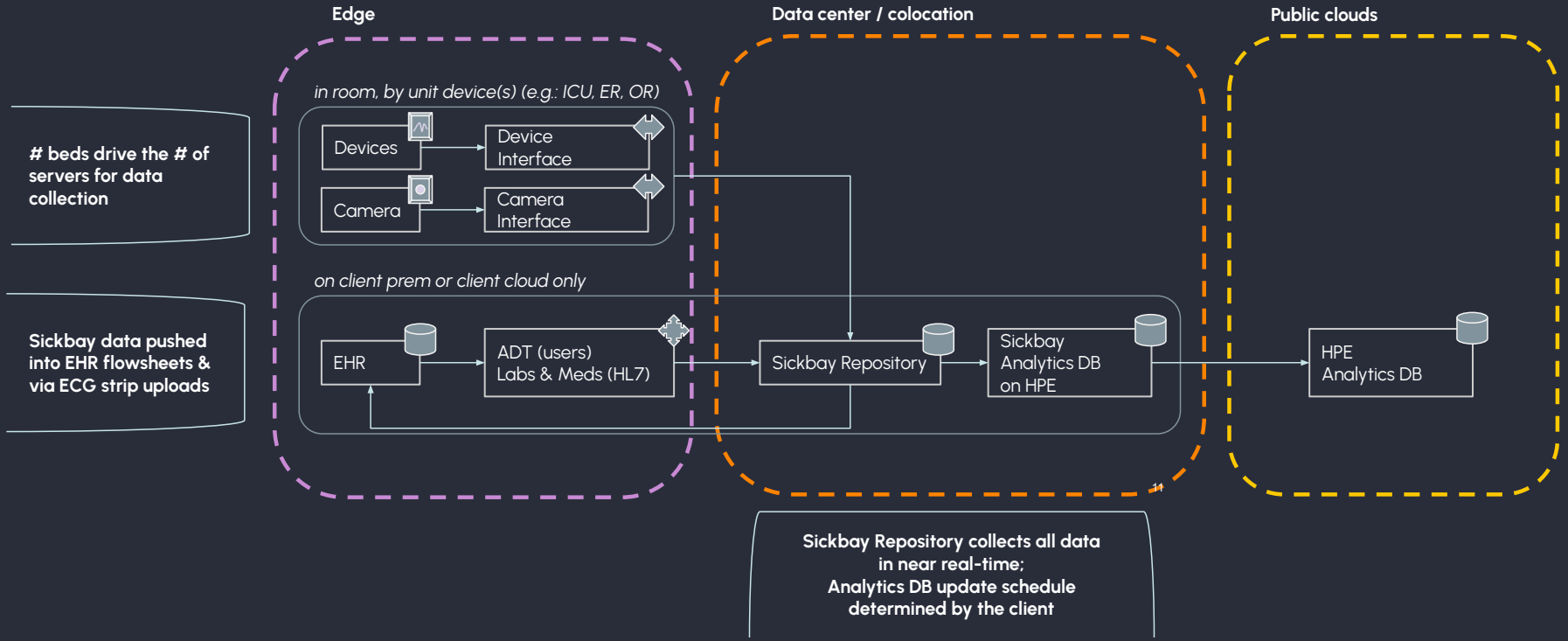
Research and innovation: Rich data for algorithm development and clinical studies

Broad Solution: A unified clinical platform for enabling AI

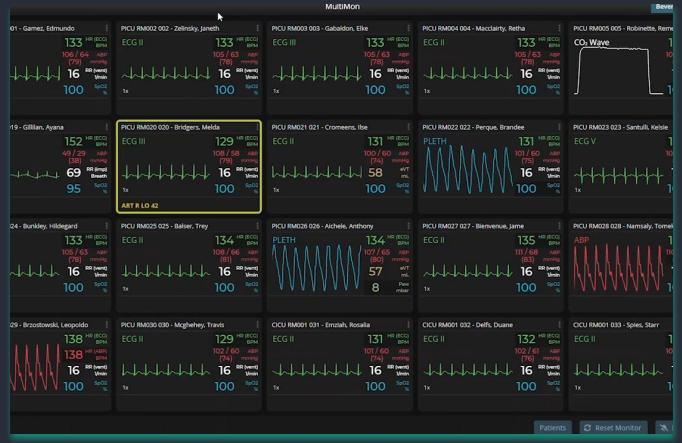


- Clinical data: Electronic health records (EHRs), laboratory results, imaging, and vital signs
- Operational data: Staffing, scheduling, patient wait times, and resource availability
- Predictive and prescriptive analytics: Tools that predict future risks or outcomes and recommend actions to mitigate risks or optimize treatments
- Real-time dashboards and KPIs: Dynamic visualizations of key performance indicators facilitate rapid decision-making

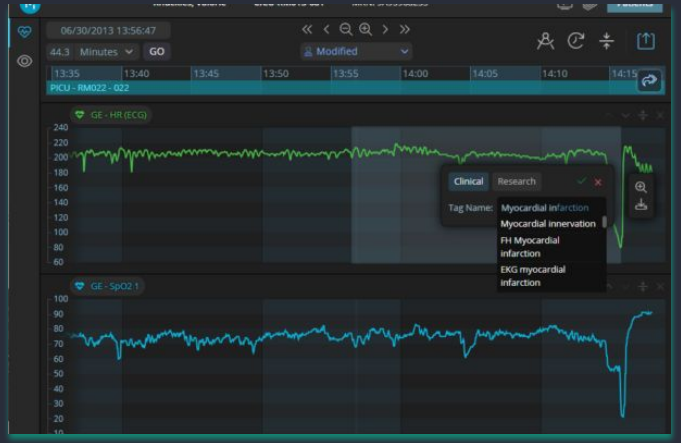
Sickbay solves time-series data collection at scale



Aggregated data creates actionable insights for clinicians from day one



Monitoring multiple patients ensures staff is prioritizing those that need immediate help

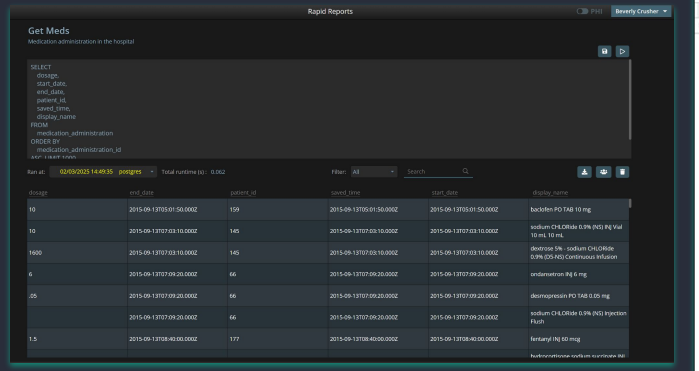


All device signals in one place provides a holistic, real-time view of patient status

Images courtesy of MIC

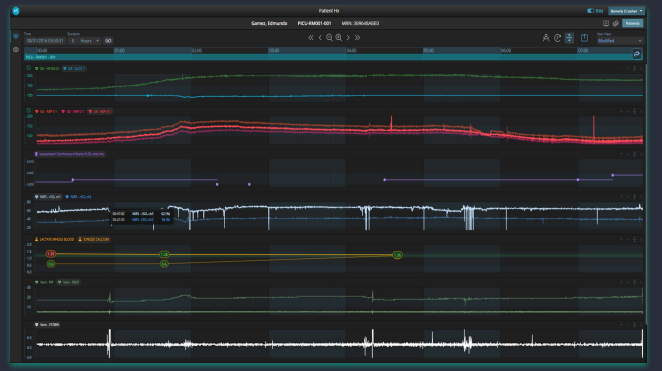
Novel dataset enables new IS-owned insights across facility

Device Quality
for Biomed



Data Lake
for Research and Quality

Complete History
for Legal



Images courtesy of MIC

HPE + Sickbay Architecture

Application software
Sickbay

Sickbay

Compute & storage for Sickbay application
HPE SimpliVity (HCI)
HPE ProLiant

Virtualization
HPE Morpheus VM Essentials Software, VMware

Networking for core, aggregation (L3), access (L2)
HPE Aruba Networking, HPE Juniper Networking
switches, gateways, access points

Storage for data archiving
HPE Alletra

Storage & software for data protection infrastructure: HPE StoreOnce, HPE StoreEver, Commvault, HPE Zerto Software

Included

HPE Financial Services
Lease contract

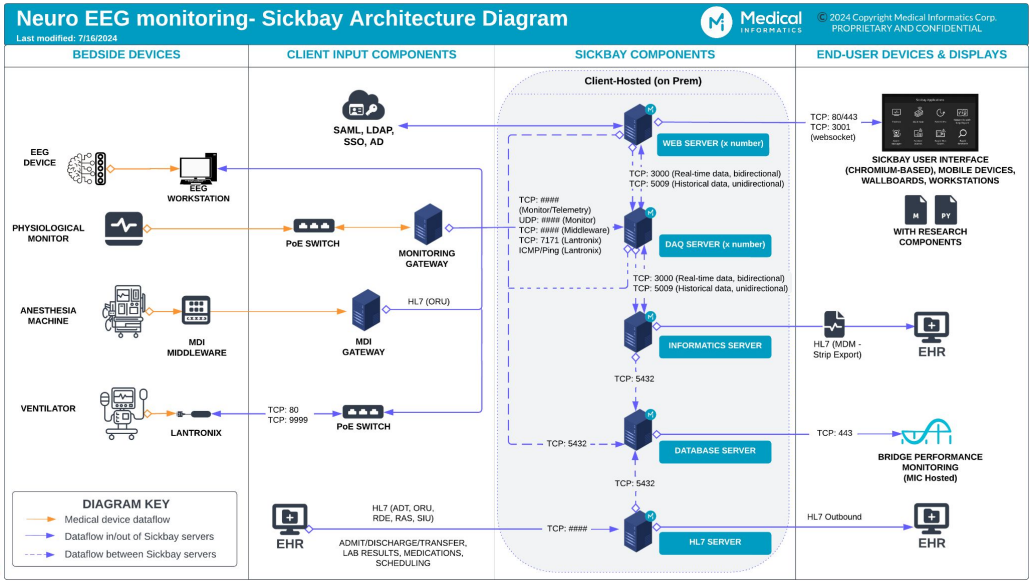
Metering
Compute—VMs
storage—GiB
Show back report

Support
Design/install/configure, support, advisory; HPE Complete Care Service; guaranteed collaboration; assigned delivery team

Optional

HPE Managed Services
Startup; IT operations and monitoring; reporting and governance

Advisory and Professional Services
Advisory and deployment; configuration and integration



Specs	Medical Informatics Virtual Servers(VM)					
	DAQ (1 per 200 beds)	Database	HL7	Informatics	Web	Test
CPU (w/ core count)	8	8	8	8	8	4
NIC (Gb)	1	1	1	1	1	1
RAM (Gb)	16 GB	16 GB	16 GB	16 GB	16 GB	8 GB
SSD (OS)	100 GB	100 GB	100 GB	100 GB	100 GB	100 GB
SSD/HDD (MIC)	500 GB	500 GB	100 GB	100 GB	100 GB	500 GB
SSD/HDD (Data)	-	-	-	12 TB/yr	-	-
OS	Windows Server 2019/2022 64-bit					

Benchmark Ballpark Number of servers (Based Upon Loading, except*)								
	Beds	DAQ	Database	HL7	Informatics	Web	Test	Total
S	30- 100	1	1	1	1	1	1	6
M	100-300	2	1	1	1	2	1	8
L	300-1000	5	2*	1	3	3	1	16
XL	1000-3000	15	2*	2	10	5	1	35

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Thank You

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