

DUKE MORGAN, RN, BSHA

Director of Clinical Systems | Clinical & Operational AI, Enterprise EMR, Automation at Scale

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SUMMARY

Registered nurse turned healthcare technology leader, with 20+ years spanning emergency department floors, enterprise EMR implementation, and applied AI architecture. I own clinical systems strategy for a multi-state fertility care network: multiple enterprise EMR platforms, hundreds of clinical users, and a multimillion-dollar annual vendor portfolio.

I also build. I put AI to work implementing and troubleshooting enterprise EMR platforms and automating the day-to-day work around them, and I write the SQL, Python, and automation that runs on it. Very few people in healthcare IT hold an active clinical license and a production codebase at the same time. That combination is why my roadmaps survive contact with real clinics.

AI STRATEGY & PLATFORM LEADERSHIP

- **Governance first.** Authored the two-lane data policy that decides what an AI system is allowed to see: PHI-bearing work stays on BAA-covered or fully local inference, while schema, code, and architecture work routes to commercial models. The boundary is enforced at the routing layer, so compliance never depends on someone remembering the rule under deadline.
- **AI strategy as an operating rhythm.** Run a standing weekly review to identify which workflows should be automated: clinical work inside the EMR, the administrative work around it, and the routine daily tasks that consume staff time. The measure is whether analysts, schedulers, and clinicians each spend less of the week on work that did not need a person.
- **Multi-agent orchestration in production.** Architected and operate a fleet of specialized AI agents behind a model routing gateway to Azure AI Foundry, with local on-premise inference reserved for PHI-sensitive workloads. Agents are scoped by role and data lane rather than given blanket access.
- **AI applied to clinical operations, not demos.** Shipped AI into the work the organization actually does: schema intelligence over a 600+ table clinical database, legacy EMR migration agents, and multi-site administrative automation.

CORE COMPETENCIES

Leadership & Strategy: Enterprise EMR Product Ownership · Clinical Systems Roadmap · Multi-Site Deployment · Vendor & Contract Negotiation · Executive & C-Suite Stakeholder Management · Budget Ownership

Clinical Informatics: EMR/EHR Implementation & Optimization · Clinical Workflow Design · Clinical Decision Support · CPOE · HL7 / FHIR Interoperability · Legacy EMR Data Migration · Go-Live Leadership

AI, Automation & Engineering: Multi-Agent AI Orchestration · Azure AI Foundry · Model Routing Gateways · Local / On-Premise LLM Deployment for PHI Isolation · Retrieval-Augmented Generation · AI-Assisted Workflow Automation · Automation Opportunity Discovery

Compliance & Security: HIPAA & PHI Governance · BAA-Governed AI Architecture · HITRUST-Aligned Design · Entra ID / SSO · Role-Based Access Control · Audit & Access Remediation · Joint Commission / CMS Readiness

Technical: MS SQL Server (600+ table clinical schemas) · Python · PowerShell · .NET · React / TypeScript · REST APIs · Git · Azure · Supabase / PostgreSQL · Windows Enterprise Administration · Microsoft 365

PROFESSIONAL EXPERIENCE

Director of Clinical Systems

Inception Fertility Ventures, LLC · Nashville, TN · Jun 2017 – Present

Clinical systems strategy and product ownership for the largest fertility care network in North America: multi-state operations serving hundreds of clinical users.

- Own the full product lifecycle for multiple enterprise EMR platforms: roadmap, release governance, vendor alignment, and optimization across the workflows clinicians use to deliver patient care.
- Manage a multimillion-dollar annual vendor contract portfolio. Negotiations, SLA enforcement, and renewal strategy, consistently expanding capability without expanding spend.
- Direct cross-functional delivery across clinical operations, engineering, external vendors, and the executive team. Sustained 95% on-time delivery through platform upgrades, cloud migrations, and compliance programs.
- Built the business case for enterprise AI in a PHI environment and established a BAA-governed Azure AI Foundry pathway for AI-assisted clinical operations work, with the data-governance policy settled before any tooling was adopted.
- Charter and own the clinical systems roadmap: multiple server migrations and platform conversions, system-wide EMR application updates, and the introduction of new systems integrated with the EMR to improve clinical efficiency. Each is architected so AI tooling touches schema and metadata only, never patient data.
- Serve as the escalation point for defects the vendor cannot reproduce, including a null-dereference that made affected patient charts both un-openable and invisible to search.

Clinical Implementation Specialist, Perioperative Systems

MEDHOST · Nov 2016 – Jun 2017

- Led surgical workflow optimization for multi-hospital EMR implementations, including gap analysis and future-state design across OR, pre-op, and PACU environments.
- Configured perioperative modules and delivered clinician training that measurably improved go-live adoption.

Clinical Application Analyst, Corporate Deployment

Community Health Systems · Mar 2016 – Oct 2016

- Developed enterprise EMR workflow templates to corporate clinical and regulatory standards, and supported go-lives onsite across emergency, surgical, and med/surg departments.

Support & Implementation Clinical Analyst, RN

MEDHOST · Jan 2013 – Mar 2016

- Conducted clinical workflow analysis across ED, OR, and Med/Surg, configured EMR systems to clinical best practice, and partnered with bedside clinicians to validate build decisions before go-live.

SELECTED ARCHITECTURE & BUILD WORK

- **Clinical Intelligence Orchestration Platform.** Architected an enterprise multi-agent AI system routed through a model gateway to Azure AI Foundry under an active BAA. A two-lane topology keeps PHI-bearing work on BAA-covered or fully local inference while routing schema and code work to commercial models, establishing a HIPAA-aligned pathway for AI in clinical operations.
- **Unified Clinical Record Access Platform.** Delivered a .NET 8 and React/TypeScript application on Azure consolidating four legacy EMR platforms into one read-only clinical viewer behind Entra ID SSO. Migrated 3M+ clinical records, 770K+ documents, and 80K+ treatment cycles, eliminated shared-credential access across all sites, and closed a cross-clinic PHI exposure with a global authorization filter.
- **Multi-Agent Workflow Automation Platform.** Built the platform the team's operational automation runs on: purpose-built agents that absorb repetitive non-clinical work, sharing a persistent knowledge base so context carries across sessions. Each agent reviews its own sessions to turn recurring manual work into reusable skills, built for one agent and then rolled out to the rest.
- **Cross-Model Agent Collaboration Layer.** A shared working room where agents built on different model families work the same problem together. The pairing that matters most is adversarial: code built by one model must survive review by a different one before it can be marked complete, so defects a single model would have shipped are caught at review, not in production.
- **EMR Administration & Data Operations Console.** Python/Flask multi-site administration tool spanning every site database in the estate: chart merge, bulk provisioning, drug library management, and permission governance, with a plan-then-apply safety model that re-validates against live state and refuses to run on drift.
- **Clinical Schema Intelligence Assistant.** AI-assisted query assistant over a 600+ table clinical SQL Server schema, scoped to schema and metadata only. Cut root-cause analysis time and shortened analyst onboarding.

SELECTED FINDINGS & REMEDIATIONS

- Audited application permissions across two production sites and executed a governed revocation of an over-provisioned module, verified by a rollback proving zero unintended change. Discovered in the process that the vendor's procedure writes no audit record for partial permission changes. The gap affects every such change made through the vendor UI, not just automated ones.
- Traced a data-integrity fault in a laboratory results migration to a non-unique record key silently collapsing duplicate groups that held differing payloads. Re-keyed the pipeline and recovered the records that would otherwise have been lost.
- Identified and closed a publicly readable patient document storage bucket, replacing it with authenticated, row-level-secured access.
- Eliminated the manual-entry burden behind project, task, knowledge base, and change advisory board intake by building AI agent skills for each path, replacing form-and-upload workflows with conversational capture.

EARLIER CLINICAL PRACTICE

Emergency Department Charge Nurse · Williamson Medical Center · Apr 2010 – Jan 2013

Led ED nursing operations as CPOE superuser, streamlining documentation workflows and routing operational findings back to IT.

Emergency Department Charge Nurse & Staff Nurse · Southern Hills Medical Center (HCA) · Jul 2005 – Jan 2010

Managed emergency nursing operations and supported EMR template optimization for Joint Commission and regulatory compliance.

EDUCATION

Bachelor of Science, Healthcare Administration (BSHA) · Western Governors University, 2025

Associate of Applied Science, Nursing (ASN) · Excelsior College, 2007

LICENSURE & CERTIFICATIONS

- Registered Nurse (RN), Tennessee / Multistate Compact License, Active
- Microsoft SQL Server, Specialization Certificate, Microsoft via Coursera, 2026
- AI Agent Fundamentals with Azure AI Foundry, Course Certificate, Microsoft via Coursera, 2026