

Clinical AI Inventory & Risk Heat Map

Artifact 1 | NorthStar Health Network

NorthStar Health Network is a fictional regional health system comprising 12 hospitals, 70 outpatient facilities, approximately 18,000 employees, and roughly 3 million annual patient encounters. All systems, metrics, incidents, vendors, and findings in this portfolio are simulated.

1. Purpose

Create a single authoritative register of AI systems that affect patient care, clinical workflow, operations, administration, and patient-facing services. The inventory is the entry point for risk classification, validation, privacy review, monitoring, and incident response.

Enterprise AI Systems Register

ID	System	Use case	Type	Data	Decision influence	Risk tier	Status
NS-AI-001	Sepsis Prediction Model	Inpatient clinical care	Clinical ML model	EHR vitals, labs, meds, demographics	Flags elevated sepsis risk	Critical	Conditional approval
NS-AI-002	Radiology Prioritization AI	Diagnostic imaging	Imaging AI	DICOM images, exam metadata	Prioritizes worklist	High	Approved with monitoring
NS-AI-003	Patient Portal Chatbot	Patient-facing service	LLM / retrieval	Portal messages, approved knowledge base	Answers general questions; routes care issues	High	Pilot only
NS-AI-004	Clinical Note Summarizer	Clinical documentation	Generative AI	Encounter notes, labs, problem list	Drafts clinician summary	High	Pilot only
NS-AI-005	Bed Allocation Predictor	Operations	Predictive model	Census, acuity, discharge estimates	Forecasts bed demand	Moderate	Approved
NS-AI-006	Revenue Cycle AI	Billing / coding	Rules + ML	Claims, codes, encounter data	Flags coding opportunities	Moderate	Approved
NS-AI-007	Employee GenAI Assistant	Internal operations	General-purpose LLM	Approved internal content only	Drafts nonclinical text	Low	Approved with restrictions

Risk Heat Map

System	Patient impact	Automation / influence	Data sensitivity	Explainability need	Overall tier
Sepsis Prediction Model	Very high	High influence on clinical response	PHI + sensitive clinical data	Very high	Critical
Radiology Prioritization AI	High	High workflow influence	Imaging + PHI	High	High
Patient Portal Chatbot	High	Direct patient interaction	PHI / portal context	High	High
Clinical Note Summarizer	High	Influences clinician understanding	Broad clinical record	High	High
Bed Allocation Predictor	Moderate	Operational recommendation	Operational + limited PHI	Moderate	Moderate
Revenue Cycle AI	Moderate	Administrative recommendation	Claims / encounter data	Moderate	Moderate
Employee GenAI Assistant	Low	No patient decision authority	No PHI permitted	Low	Low

Minimum inventory fields

- System and version; internal and vendor owners; intended use and out-of-scope use; patient populations and clinical settings; data sources and retention; decision influence; human oversight; regulatory / certification relevance; validation evidence; privacy and security review; monitoring owner; incident owner; lifecycle status; next review date.

Portfolio finding

The most significant governance gap is not the existence of high-risk AI. It is the absence of a unified record linking each system to accountable owners, evidence, approval conditions, and post-deployment monitoring.