JDSAT

EXMED EDGE

Predictive Planning for Expeditionary Medical Logistics

OVERVIEW

EXMED Edge is an evolving decision support application under development to improve how Navy Medicine's logistics enterprise anticipates and plans for future operational needs. The application enables medical logistics (MedLog) planners to evolve readiness for Expeditionary Medical units (EXMEDs) from reactive resourcing to a proactive, scenario-based forecasting process across multi-year horizons.

The goal of EXMED Edge is to provide operational leaders with a way to test assumptions and visualize impacts. It supports logistics decisions that are both data-driven and policy-informed, particularly in environments where timely, integrated operational demand and readiness data has historically been limited or unavailable.

CAPABILITIES

Scenario-Based Forecasting
Model equipment and supply requirements over time based on evolving operational demands and historical trends

Integrated Readiness Insights
Align planning across units, equipment sets, and operational timelines to identify gaps before they become constraints

Assumption Tuning
Databricks NIPR and SIPR clusters for data processing, transformation, and model training, Qlik and Streamlit for interactive scenario exploration and visualization

Access Model
Restricted to authorized users with access to Health Analytics Streams in Jupiter NIPR and SIPR environments

Interactive Exploration
Designed for a visual, user-driven experience that supports real-time comparisons and planning conversations

TECHNICAL APPROACH

Architecture
EXMED Edge leverages the Advana/Jupiter NIPR and SIPR environments, building on production-stream-deployed apps such as the Navy Medicine Equipment and Supply Readiness module

Data Sources
Readiness and historical data from Joint Medical Asset Repository (JMAR) (within Jupiter environment); Maintenance data from DMLSS; Production and asset lifecycle data maintained by the Naval Medical Readiness Logistics Command (NMRLC)

Components
Databricks NIPR and SIPR clusters for data processing, transformation, and model training, Qlik and Streamlit for interactive scenario exploration and visualization

Access Model
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USE CASES

Strategic Readiness Planning
Inform long-term sourcing strategies based on predictive equipment demand curves

Operational Coordination
Facilitate shared understanding of EXMED needs across TYCOMs and functional leads

Wargaming & Scenario Testing
Explore how changing variables (e.g., delayed shipments, increased mission load) affect readiness

WHY IT MATTERS

EXMED Edge is part of a broader effort to strengthen data-informed decision-making for Navy Medicine logistics. By creating a forward-looking tool for equipment and supply planning, it aims to reduce the reliance on manual coordination and enable more adaptive, resilient operational support.

CONTRACTOR DATA:
CAGE: 6ZF65
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PRIMARY NAICS:
541330: Engineering Services
541614: Operations Research
541690: Other Scientific Consulting
541511: Custom Programming

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