Healthcare Operations Dashboard

Real-time visibility replacing quarterly reporting for multi-hospital health system

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5	4	Real-time	React/TS
USER ROLES	DRILL-DOWN LEVELS	DATA VISIBILITY	TECH STACK

THE CHALLENGE

A multi-hospital health system relied on quarterly PDF reports to track surgery room utilization. This created three critical problems:

- **No real-time visibility** — decisions made on stale data
- **No drill-down capability** — couldn't identify specific underperformers
- **Physician resistance** — fear of unfair evaluation metrics

THE SOLUTION

Interactive React dashboard with hierarchical navigation and role-based access:

- **Region → Hospital → Unit → Room → Surgeon** drill-down
- **5 user roles** with appropriate data visibility
- **Configurable metrics** with weighted scoring
- **Dispute resolution workflow** for contested evaluations

MY ROLE

- Led end-to-end UX design from requirements to implementation
- Built fully functional React/TypeScript dashboard using Claude AI agentic coding
- Designed role-based permission system balancing transparency with privacy
- Created change management approach for sensitive performance data rollout

KEY DESIGN DECISIONS

- **Tier system over rankings** — less threatening to physician relationships
- **Calendar view integration** — context for utilization patterns
- **Dispute workflow** — built-in path for contesting metrics
- **Configurable weights** — adaptable to different specialties

TECHNICAL IMPLEMENTATION

React · TypeScript · Recharts · Role-Based Access Control · Responsive Design · Data Visualization · Hierarchical Navigation · State Management

RESULTS & IMPACT

The dashboard prototype demonstrates how real-time visibility can replace static quarterly reporting while addressing the human factors that often derail data-driven initiatives in healthcare settings. The dispute resolution workflow and tier-based evaluation system show how to balance accountability with physician relationship management — a critical success factor for healthcare technology adoption.

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