The Problem We Solve (The Silent Killer)

During a health crisis, critical equipment failure is devastating. Hospitals need their gear to be operational 100% of the time. However, maintenance is often reactive (fixing things *after* they break) and manual, leading to:

1. **Downtime:** A critical ventilator fails when ten more are needed.
2. **Delays:** Sourcing replacement parts or backup machines is slow and chaotic.

How PraxisGuard Works: The Three Autonomous Agents

Our solution uses three agents that coordinate to turn reactive maintenance into **proactive reliability**.

1. The Sensor Agent (Predictive Failure)

- **What it does:** This agent continuously collects and analyzes **real-time sensor data** (vibration, temperature, error codes) from all connected medical devices (IoT integration).
- **The Autonomous Action:** It runs a Predictive Maintenance (PdM) model to calculate the **Probability of Failure (PoF)** for each machine over the next 72 hours.
- **The Result:** We know *which* machine is going to fail *when*, allowing for proactive intervention.

2. The Logistics Agent (Autonomous Scheduling)

- **What it does:** This agent is triggered when the Sensor Agent predicts a high PoF.
- **The Autonomous Action:** It instantly checks inventory, automatically **orders required parts**, finds the soonest available maintenance slot on the technician's calendar, and **negotiates the downtime** with the hospital's patient scheduling system to minimize disruption.
- **The Result:** Maintenance is scheduled and parts are ordered without any human input, **before** the machine actually breaks.

3. The Contingency Agent (Crisis Re-Routing)

- **What it does:** This agent activates if a critical machine fails instantly and unexpectedly.
- **The Autonomous Action:** It autonomously searches a secure, authorized network of nearby affiliated hospitals (via API) to **locate the closest, verified, and operational backup machine**. It then immediately coordinates transport and sterilization.
- **The Result:** Near-zero downtime for critical patient care, even after an unexpected failure.

Why PraxisGuard Will Win

This is a winning idea because it addresses a unique, high-value problem—**infrastructure reliability**—which is often ignored in favor of patient-facing apps. It uses sophisticated technical integration (**IoT, PdM, autonomous API calls**) to deliver true **Agentic AI** value.

PraxisGuard