

Overview

NeuroVisual Medicine Institute (NVM), specializes in advanced diagnosis and treatment for patients suffering from Binocular Vision Dysfunction (BVD). As patient engagement and accurate assessment are vital to their services, the institute faced mounting challenges in managing leads, handling sensitive patient data, and transforming questionnaire responses into actionable insights.

The reliance on manual Excel-based lead tracking and third-party questionnaire tools (e.g., Typeform) created inefficiencies, data security risks, and scalability bottlenecks.

To address these challenges, our team designed and developed a secure, scalable, HIPAA-aligned Patient CRM platform, purpose-built for NVM's global network of certified providers. The platform streamlines patient intake, dynamically calculates BVD scores, and automatically recommends top doctors, while empowering administrators with real-time control over leads, billing, and provider memberships.

Problem Statement

- NVM's existing processes created several pain points :
- 1. **Manual lead tracking** via spreadsheets led to inefficiency and data loss.
  - 2. **Sensitive patient data** lacked adequate security safeguards.
  - 3. **Questionnaire management** was error-prone and dependent on external tools.
  - 4. **Provider allocation** of leads was not scalable across a global network.
  - 5. **Revenue tracking** for subscriptions and billing lacked transparency.

- There was a need for a centralized, secure platform that could:
- **Automate lead** intake and recommendation of doctors.
  - Protect **PHI** under **HIPAA** standards
  - Enable providers to manage **patient interactions** and subscriptions.
  - Give administrators oversight of **doctors, billing, and dynamic questionnaires**.
  - Support global scalability for NVM's expanding provider base.

Solution

- We developed a web-based Patient CRM system exclusively for NVM providers worldwide.
- 💡 **Dynamic Questionnaire Management** using FormSort, with clinically approved scoring for BVD.
  - 💡 **Automated Doctor Matching** – top 3 recommended providers based on patient score, location, and membership status.
  - 💡 **Lead Management** – Kanban-style pipeline to track lead progress from new inquiry to consultation.
  - 💡 **Provider Onboarding** – doctors can register, subscribe, and manage profiles (location, specialty, billing).
  - 💡 **Admin Control** – full oversight on questionnaires, lead distribution, billing, and staff assignments.
  - 💡 **HIPAA Safeguards** – encryption, audit logs, auto log-off, and access control
  - 💡 **Subscription Model**

Core Features

- 1. **Patient Portal** – pre-questionnaire, assessment wizard, automated score, top doctor recommendations, and scheduling requests.
- 2. **Doctor Portal** – profile management, subscription payments, lead tracking, and communication notes.
- 3. **Admin Portal** – billing management, lead allocation, doctor onboarding approvals, staff roles/permissions.
- 4. **Dynamic Questionnaire Builder** – admins can create/edit questions, logic, and scoring categories.
- 5. **Billing & Reports** – subscription payments via Stripe, lead allocation reports, and exportable financial data.
- 6. **Staff Management** – role-based access for practice staff to manage assigned providers.

Challenges and Solutions

- Challenges

  - ★ Lack of security and compliance in handling PHI.
  - ★ Scaling lead management for a global provider base.
  - ★ Automating doctor recommendation logic
  - ★ Handling flexible revenue models (subscription vs. leads).
- Solutions

  - 💡 Implemented HIPAA technical safeguards including encryption, auto log-off, and audit logging
  - 💡 Built a scalable architecture to support global providers and multiple locations.
  - 💡 Automated doctor recommendation engine using distance + membership logic.
  - 💡 Integrated Stripe billing for transparent subscription management.

Benefits of our solution

- ✔ 80% questionnaire completion rate achieved through FormSort's dynamic, user-friendly design.
  - ✔ 25% faster patient-to-doctor matching due to automated scoring and recommendation engine.
  - ✔ 100% data security compliance with HIPAA safeguards, protecting PHI and building patient trust.
- ✔ 20–30% reduction in administrative time by eliminating manual data entry and Excel-based tracking.
  - ✔ Improved patient retention by 15–20% through personalized engagement and smoother lead conversion.
  - ✔ Increased provider satisfaction with transparent subscription billing and lead visibility.

Technology stack

- ★ Backend : Node.js, Express
  - ★ Database : MongoDB
  - ★ Third-Party Integrations : FormSort (dynamic questionnaires), Stripe (billing), Geolocation APIs
- ★ Frontend : React.js
  - ★ Security : HIPAA safeguards – encryption, audit logs, auto logof



Screenshots

