



Custom Application Development Services Enable a Surgery Clinic to Effectively Manage Patient Lifecycle

CASE STUDY

Customer: A renowned oral and maxillofacial surgery (OMS) clinic

Size: <50 employees

Location: United States

Industry: Healthcare

Profile: The client provides dental implants, wisdom teeth removal, tooth extraction, facial trauma treatment, corrective jaw surgery, bone grafting, and sleep apnea treatment.

Services: Custom application development

Business Need

Electronic health record (EHR) applications in clinical routine have the potential to help surgeons effectively view patients' medical records, improve communication between patients and surgeons, and implement patient safety through decision support and better access to medical records.

The OMS clinic had a basic desktop-based EHR application. They wanted to migrate this application to a web-based EHR application, intending to access patient medical records anywhere, at any time, and allow patients to participate in the decision-making and treatment planning processes.

Solution and Approach

After a thorough review of the client's existing desktop-based EHR application and considering the specific requirements of the client, Synoptek developed a custom EHR application that covers a significant part of the patient's lifecycle. Important functions include:

- Patient registration consisting of patient demographics, detailed history information, referrer, provider, and pharmacy details
- Electronically documented oral surgery records consisting of consultation, procedures, and follow up notes for patients
- Patient insurance, previous drug history, and allergy information for generating prescriptions with alternative drugs and copay benefits
- ICD (International Classification of Diseases), CPT (Current procedural terminology), and CDT (Code on Dental Procedures) codes storage with notes used for billing
- Storing X-rays and other clinical assessment reports
- There are no contradictions with prescriptions currently being taken
- The drug doesn't cause an allergic reaction
- Inappropriate dosage is not administered to the patient

The application has a repository of over 8,000 configured templates, which help surgeons generate patient notes efficiently and quickly. It is integrated with Surescripts via a third-party e-prescription engine.

Surgeons can clone, edit, or create new templates that consist of static information and dynamic fields, which get replaced with patient history information from the database, or information selected by surgeons while generating notes.

Other critical features of the application include:

Drug prescription

Drug prescription for patients is done based on the past medical drug history to ensure:

The service puts eligibility and formulary information at the prescriber's fingertips at the time of prescription. This step enables prescribers to select medications that are on formulary and are covered by the patient's drug benefit.

Medical coding standards

The application follows CDT (Current Dental Terminology) / ICD (International Classification of Diseases) codes, which are provided to identify each disease or the procedures done on patients. These codes assist in billing and in reviewing claims issued by insurance companies. The application includes flash code integration to stay updated with the latest ICD/CDT codes.

Reporting

With the help of the application, patient notes can be generated as reports and stored directly at any remote location.

New patients wanting to undergo treatment need to fill in a questionnaire, which is customized based on treatments. Responses to each question determine the next set of questions.

E-prescription Routing

This service allows prescribers to prepare and send a prescription directly to computers across 85% of the nation's retail pharmacies and six of the nation's largest mail-order pharmacies. In turn, pharmacies can use this service to send requests for prescription renewals directly to the computer at a practice where prescribers can review and respond to them directly.

Medication history

Surescripts delivers medication history information across providers during a patient's visit through electronic prescription and EHR systems that are certified for the Medication History service. Prescribers who can access critically important information on their patient's current and past medications are better informed about potential medication issues with their patients and can use this information to improve safety and quality.

Medication History can also be used for reconciliation support for patients being treated in an in-patient setting.



Business Results

Synoptek's custom web-based EHR solution has proved to be an efficient and user-friendly application that covers all the information and workflows, from patient intake to diagnosis, to treatment history to prescriptions, insurance records, and related data.

The solution provides the client with the tools and workflows required to manage the patient lifecycle effectively and enhance experience across all touchpoints to drive higher engagement.

About Synoptek

Synoptek is a global systems integrator and managed IT services provider offering comprehensive IT management and consultancy services to organizations worldwide. Founded in 2001; headquartered in Irvine, CA, we have offices and resources across North America and delivery centers in Asia.



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