

## Success Story

# Helping Novadontics to develop a digital marketplace and PMS for dentists

### Customer

Novadontics

### Country

USA

### Industry

Healthcare

## About The Client

Founded in 2016 and guided by industry professionals and technology experts, Novadontics is a healthcare technology company based in the United States. It packages practice management, patient engagement, GPO membership, and more in their flagship platform called Care Pulse.

Care Pulse is a cloud based practice management solution for dentists that enables them to automate patient acquisition and engagement operations and operate more efficiently.

## Technology Stack



## Business Situation

Patients typically have challenges in locating and evaluating dental care providers. This often results in delays in getting critical dental procedures. They are challenged by a lack of detailed information about dental clinics and qualifications of their staff, making the decision-making process for dental treatment more complicated and time-consuming.

Novadontics recognized the need for a specialized marketplace that would simplify this process and expedite the decision based on various aspects such as location, reviews, experience etc. Their goal was to create a platform that would do more than facilitate appointment bookings for dental patients. They envisioned a service that would provide a detailed profile of dentists, showcasing their credentials, specialties, and patient reviews. The platform would act as a digital receptionist for onboarded dentists, managing schedules and patient flow. It would facilitate detailed patient records, treatment tracking, and secure financial transactions, all within a user-friendly interface. Designed for the specific needs of dental practices, this all-in-one system intended to streamline administrative tasks, allowing dentists to focus on delivering quality patient care and optimizing their practice's operational efficiency.

The client required a tech partner with experience in developing software for the healthcare industry and a thorough understanding of dental compliance, terminology, and regulations. They chose Unthinkable Solutions for its impressive cost vs value creation as well as its track record for delivering innovative healthcare IT solutions.

- ✔ Conceptualize and plan the entire development process for the envisioned application, including recommending the most efficient software architecture, technology stack, and UI/UX design.
- ✔ Implement robust security measures to protect patients' protected health information (PHI) and electronic health records (EHRs) in cloud-based data centers against unauthorized access and data breaches.
- ✔ Create a user-friendly interface for patients, doctors, and administrators to ensure a seamless experience.
- ✔ Integrate comprehensive features such as interactive dashboards, reports, virtual consultations, etc. for both patients and dentists.
- ✔ Customize the platform to accommodate the specific needs of various dental practices and geographical areas.
- ✔ Provide detailed profiling capabilities for dentists to display credentials, specialties, and patient feedback.
- ✔ Establish role-based access controls to differentiate between admin, dentist, and patient permissions

## The Solution

The project began with our business analysts conducting an in-depth analysis of the various factors that influence a patient's decision when choosing a dentist in a specific locality. This comprehensive study involved gathering data on the existing market conditions, including competitor analysis, patient pain points, and customer demand patterns. By leveraging data from this research our analysts were able to map out the key features desired by users, such as the ability to search for dentists by specialty, availability, and insurance acceptance.

After the groundwork was done, our software architects designed an optimal architecture for the new platform. They prioritized scalability, performance, and security, taking into account the system's technological requirements to ensure that it could support the practice's growth.

Our product designers conducted user research to better understand the behaviors, demands, and issues that the platform's end users experience. They completely planned the user journey, creating interactive prototypes that provided the platform's layout, flow, and features.

With the architecture and design in place, our developers used modern frameworks such as React to create a dynamic and responsive user interface that provides an intuitive experience for both patients and dental clinic staff. Scala was used to build the backend, which effectively manages application logic and database interfaces.

Data security and compliance with healthcare standards were important to protect patient information, the platform was built with comprehensive security features such as frequent security audits, secure data storage solutions, and end-to-end encryption.

The application was hosted on a HIPAA-certified cloud datacenter utilizing AWS CloudFront. This setup not only ensures maximum uptime, flexibility, and cost savings but also ensures robust data security and compliance requirements.

**Some of the highlights of the dental care marketplace are as follows:**

#### **Geo location services**

The app uses GPS to determine the user's exact location and promptly generates a list of dental practitioners nearby. Each dentist's profile displays the distance from the user, simplifying the decision of how far to travel for an appointment. This feature not only makes it easier for consumers seeking urgent dental treatment but also allows them to select the most accessible and appropriate dentist depending on their individual location and mobility needs. To enhance the app and address the pain point of finding a nearby dentist effortlessly, we integrated a third-party React Native library called react-native-geocoding.

#### **Dentist profile and reviews**

The app provides detailed profiles of each listed dentist, including their professional qualifications, areas of expertise, and dental treatments offered. The portal also features actual patient reviews, which provide users with vital insights into the quality of care and patient experiences. This comprehensive information assists users in selecting dentists who fulfill their specific requirements and preferences, hence increasing trust and satisfaction with their healthcare choices.

#### **Real-Time appointment scheduling**

The real-time appointment module allows users to easily explore and select from the available appointment times for the desired dentist. When a user selects a time slot and schedules an appointment, the application instantly sends a confirmation notice to both the patient and the dentist, ensuring that all parties are completely aware of the next visit. This feature simplifies the scheduling procedure, eliminates the need for back-and-forth phone conversations, and gives rapid confirmation of appointment details to all stakeholders involved.

## The Impact

### Payment options

The patient interface simplifies the payment procedure for the user booking teledental appointments by providing a variety of options, including credit card and debit card. After making a payment, patients can download a receipt to keep for their records or to present during their visit.

### Admin panel

The admin panel works as a hub for administrators to monitor operations, manage stakeholders, and provide a consistent experience and many aspects of the healthcare system. Let's have a look at the features provided in the admin panel

### Care Pulse providers

This aspect of the portal includes complete dentist profiles, easy onboarding and credential verification, location, and extensive provider management tools for updating and maintaining current, accurate provider information for patient convenience and trust.

### Care Pulse appointments

This feature provides admin with a dynamic calendar displaying information such as time, date, patient and hospital names, appointment type, and fees, among other things, allowing them to properly manage, organize, and monitor scheduling and operations.

### Care Pulse revenue

This section provides admin with a detailed log of all payment activities, including completed transactions, refunds, and cancellations, providing them to conveniently track and manage the system's financial flows.

Unthinkable Solutions development of Care Pulse provided a straightforward and efficient platform for patients to search and book dental appointments, leading to improved satisfaction. The system's real-time booking capabilities eased the workload for dental practices, enhancing their operational efficiency. The platform successfully attracted numerous dentists and patients, fostering a dynamic marketplace for dental services. Additionally, the analytics features offered practices insights into patient trends, aiding in the refinement of services and marketing efforts. With a solid architecture in place, Care Pulse scaled effectively to accommodate its expanding user base while maintaining performance and security standards. In summary, Unthinkable Solutions delivered a functional and reliable online platform tailored to meet the dental industry's needs.

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