Rosebank College

Website Proposal Draft

Web Development (Introduction)

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WEBSITE PROPOSAL DRAFT FOR HEALTHCARE+

1. Organisation Overview

1.1 Introduction The website project

The healthcare industry is rapidly changing, and technology plays a central role in improving service delivery and treatment of patients. Online websites increase patients' accessibility to services with improved efficiency (WHO, 2023). As such, this project proposes an interactive and user-friendly website enabling patients to schedule doctor appointments online.

1.2 Purpose and importance of the system

Automation of administrative functions reduces the workload of healthcare workers and simplifies clinical processes (BMA, 2022)The proposed website will automate appointment scheduling, empower patients to manage their healthcare needs on their own, and introduce features such as real-time scheduling, profiles of doctors, and secure messaging to improve the overall experience.

1.3 Supporting Evidence and Sources

"Digital technologies help reduce administrative inefficiencies and improve access to care." (WHO, 2023; BMA, 2022)

2. Website Goals and Objectives

This website is designed with a set of clearly outlined objectives and measurable goals to increase the efficiency of the medical practice and patient and healthcare provider satisfaction.

2.1 24/7 Availability of Patient Appointments

Patients are able to login and book an appointment with their doctors at any given time and location on any device. This enhances convenience and increases patient control over coordinating care at their own convenience.

Allowing patients to log in and book appointments at any time and from any place is more convenient and gives the patient greater autonomy of care (WHO, 2023).

2.2 Doctor Profile Visibility and Transparency

Providing complete practitioner profiles like qualifications, specialism, and availability, enhances transparency and allows for informed decision-making, which is key to digital usability (Norman C Nielsen, 2020)

2.3 Reduction in Call Volume and Waiting Time

Automated scheduling reduces phone and in-clinic bookings, a factor that significantly impacts waiting times in clinics (BMA, 2022). The system minimizes telephone and in-office scheduling to a large degree using automatic appointment scheduling, hence conserving waiting times for the clinic.

2.4 Improved Patient Communication using Digital Channels

Automated reminder systems help to get rid of missed appointments and improve the effectiveness of communication (NHS Digital, 2021). The website will therefore offer email and SMS reminders for appointment confirmations, cancellations, and rescheduling.

2.5 Improved Staff Efficiency using Scheduling Features

Panel scheduling releases staff from tedious clerical tasks, improving the workflow and efficiency (NHS Digital, 2021; Krug, 2014). Administrative and clinical staff will be able to view a special panel to improve management of appointments, doctor availability, and patient scheduling, thus being free from mundane clerical tasks.

3. Proposed Website Features and Functionality

For the above goals to be accomplished, the following features will be implemented on the website. All features have been created with considerations to usability, security, and accessibility.

3.1 Secure User Accounts

Password protection, encryption, multi-factor authentication, and role-based access secure login will protect confidential patient data in accordance with healthcare privacy guidelines (NHS Digital, 2021).Both doctors and patients will enjoy password-protected individual accounts with unique log-in credentials. Patient data will be encrypted and stored in compliance with health information privacy regulations. Multi-factor authentication and role-based access control will be applied.

3.2 Full Doctor Listings

Each doctor will have a profile with a professional picture, biography, qualifications, specialties, languages spoken, and availability. Having this type of information increases trust and supports patient choice (Norman C Nielsen, 2020).

3.3 Real-Time Appointment Booking System

Real-time dynamic booking calendars eliminate errors such as double booking and guarantee proper scheduling (WHO, 2023).The patients will be given an online dynamic calendar of booking that is available from the doctor's schedule. The system would prevent double bookings by checking real-time availability and updating the calendar.

3.4 Automated Notifications (Email/SMS)

Automatic reminders, confirmations, and updates such as cancellations or rescheduling will be sent to patients, maximising communication efficiency (NHS Digital, 2021).The process will automate appointment reminders, confirmations, and notifications like cancellation or rescheduling via email or SMS. This reduces no-show appointments and maximizes communication efficiency.

3.5 Admin Panel for Office Staff

There will be an admin panel to facilitate staff in monitoring appointments, adjusting availability, and managing cancellations or rebooking, improving organisational management (BMA, 2022).

3.6 Access to Patient Appointment History

Providing patients with access to prior visits, upcoming appointments, and associated notes allows them to track their care and improves continuity (Krug, 2014).Patients can see their entire appointment history like past consultations, upcoming visits, and notes (if relevant). This facilitates continuity of care and allows patients to track their health interactions.(Krug, 2014)

4. Timeline and Milestone

Phase	Task	Timeline
Planning and Research	Requires gathering competitor analysis	Week 1 - 2
Design	WireFrames & Color schemes	Week 1-2
Development	Doctor Profiles, Appointment booking , Notifications & admin panel	Week 2-3
Testing	Functional , Usability & mobile responsiveness.	Week 2-3
Deployment	Final Deployment maintenace plan	Week 4-5

5. Design and User Experience

5.1 Colour Scheme.

Colours influence user perception via psychological connections (Lidwell et al., 2010). The website will therefore use a professional colour palette: blue to represent trust, green for health, and white.

- Primary: Blue (#1E88E5) – trust and dependability.
- Secondary: Green (#43A047) – wellness and health.
- Neutral: White (#FFFFFF), Grey (#F5F5F5) – clean modern look.

5.2 Typography.

Minimalist typography maximizes usability and legibility (Krug, 2014; Norman C Nielsen, 2020). Roboto Bold will be used for headings and Open Sans Regular for the body text, with good structure and high contrast. Navigation will be kept plain with prominent sections such as Home, About Us, Doctors, Appointments, and Contact.

5.3 Mobile-grid layout for universal usability.

Adaptive grid layouts ensure cross-device usability and WCAG 2.1 accessibility compliance. Easy navigation and speedy booking processes are also enabled through the structures *(NHS Digital, 2021; Norman C Nielsen, 2020).

5.4 Wireframes.

Low-fidelity wireframes will ensure clearness and effectiveness of user-focused design through site organization and flow mapping (Krug, 2014). Wireframes will establish main sections like the homepage, doctor pages, booking page, and admin dashboard.

6. Technical Requirements

The website will be hosted on a secure platform and will be SSL-certified to safeguard patient data (NHS Digital, 2021). Development will be conducted using HTML5, CSS3, and JavaScript to ensure a responsive user interface (Norman C Nielsen, 2020). Security will include multi-factor authentication and role-based access to maintain safety for sensitive health data (WHO, 2023).

7. Budget (Estimated)

- Domain C Hosting: R2,775 – R4,625 per year
- Development Tools: Mainly free (open-source)
- SMS/Email Services: R11,100 – R22,200 yearly
- Maintenance C Updates: R9,250 – R18,500 yearly
- Design/Branding (if outsourced): R3,700 – R9,250 (once-off)

Total estimated Year 1 cost will be between R26,825 to R54,575, which accords with reported investments in digital healthcare systems (BMA, 2022).

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