

Feature Specification: Paediatric Nephrology Clinic Website

Feature Branch: 001-pediatric-nephrology-website

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Status: Draft

Input: WordPress Template Specification: Paediatric Nephrology Clinic - A complete design and functional specification for a dual-audience website serving parents/guardians and referring physicians with condition explainers, treatment procedures, professional articles, and staff profiles.

Clarifications

Session 2025-10-16

- Q: How should the website determine which language to display initially? → A: User explicitly selects language on first visit via prominent language switcher, then preference is saved in browser (cookie/localStorage) for future visits
- Q: What happens when content exists in one language but not yet in others? → A: Content can be published in English first, with Sinhala/Tamil translations added later; language switcher shows fallback to English if translation unavailable
- Q: How should fonts be handled for Sinhala and Tamil content? → A: Use web fonts from Google Fonts or similar CDN that support Sinhala/Tamil Unicode with fallback to system fonts if loading fails
- Q: How should search work when users type queries in different languages? → A: Search prioritizes results in user's selected language, with option to expand search to include other languages if needed
- Q: How should article translations be structured and linked? → A: Each translation is a separate content entity with language attribute and links to related translations (e.g., English article ID 123 links to Sinhala article ID 456, Tamil article ID 789)
- Q: What happens when CDN-hosted web fonts for Sinhala/Tamil fail to load or load slowly? → A: Immediately render with system fonts, swap to web fonts when loaded (FOUT - Flash of Unstyled Text with font-display: swap)
- Q: How should outdated or deprecated medical articles be handled across all three languages? → A: Update articles in-place with prominent "Updated [date]" notice and version history; archive truly obsolete articles with redirects to replacement content
- Q: Who maintains the medical abbreviation/synonym mapping for search and how is it kept current? → A: Medical staff maintain glossary
- Q: How should user behavior data (language preference, journey progress, search queries) be stored for privacy compliance? → A: No persistent storage at all; users must re-select language each visit and journey progress is not tracked
- Q: What is the remediation workflow when accessibility issues are discovered post-launch? → A: Critical/high-severity issues fixed within 1 week; medium/low within quarterly maintenance cycles; monthly accessibility audits scheduled to catch issues proactively

User Scenarios & Testing (*mandatory*)

User Story 1 - Parent Finding Treatment Information (Priority: P1)

A parent whose child has just been diagnosed with a kidney condition visits the website to understand the diagnosis, available treatments, and what to expect during their child's care journey.

Why this priority: This is the primary use case representing the most common visitor scenario. Parents need immediate, accessible information during a stressful time, and this directly impacts patient care and family wellbeing.

Independent Test: Can be fully tested by navigating from homepage to a condition explainer page, verifying content readability, and accessing related treatment information. Delivers immediate value by providing critical health information.

Acceptance Scenarios:

1. **Given** a parent visits the homepage for the first time, **When** they look for information about their child's kidney condition, **Then** they can find the "Kidney Conditions" section within 3 clicks
 2. **Given** a parent is reading about a kidney condition, **When** they need simpler explanation of medical terms, **Then** content is written at grade 8-9 reading level with clear definitions
 3. **Given** a parent has read about a condition, **When** they want to learn about treatment options, **Then** related treatment articles are clearly linked and labeled "For Families"
 4. **Given** a parent is viewing treatment information, **When** they need to know what their child will experience, **Then** the procedure page describes the experience from a child's perspective
 5. **Given** a parent needs support resources, **When** they finish reading about a condition or treatment, **Then** family support resources are prominently displayed
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User Story 2 - Referring Physician Accessing Clinical Guidelines (Priority: P2)

A referring physician needs to quickly access referral protocols, clinical guidelines, and criteria for referring patients to the paediatric nephrology clinic.

Why this priority: Physicians are a key referral source and need efficient access to professional resources. This impacts patient flow and inter-professional collaboration but is secondary to direct patient/family needs.

Independent Test: Can be tested by accessing professional content through dedicated navigation, verifying content contains clinical details and citations, and confirming referral process documentation is available. Delivers value by streamlining physician workflow.

Acceptance Scenarios:

1. **Given** a referring physician visits the website, **When** they need clinical information, **Then** professional content is clearly labeled and distinguishable from family-focused content
 2. **Given** a physician is viewing professional articles, **When** they need to verify information credibility, **Then** content includes citations, references, and author credentials
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3. **Given** a physician wants to make a referral, **When** they look for the referral process, **Then** referral guidelines and contact information are easily accessible from professional content sections
 4. **Given** a physician needs specific clinical protocols, **When** they use the search function with the "For Professionals" filter, **Then** results show only professional-level content
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User Story 3 - [Brief Title] (Priority: P3)

[Describe this user journey in plain language]

Why this priority: [Explain the value and why it has this priority level]

User Story 3 - Patient Journey Navigation (Priority: P2)

A family whose child will undergo kidney transplantation needs to understand the complete journey from pre-transplant preparation through post-transplant care, accessing information in a logical sequence.

Why this priority: Complex medical journeys require structured information delivery. While critical for comprehensive care understanding, it builds upon basic condition/treatment information (P1).

Independent Test: Can be tested by following a multi-article journey module (e.g., "Navigating a Kidney Transplant"), verifying sequential navigation works, and confirming each stage provides appropriate information. Delivers value by reducing family anxiety through structured guidance.

Acceptance Scenarios:

1. **Given** a family needs to understand a multi-step treatment journey, **When** they access a journey module, **Then** articles are grouped into a clear sequential series with visible structural indicators (e.g., "Article 2 of 5")
 2. ~~**Given** a family is partway through a journey module, **When** they need to find where they left off, **Then** the system shows their progress through the series~~ **REMOVED:** No user progress tracking for privacy compliance; users navigate series manually
 3. **Given** a family completes one article in a journey, **When** they finish reading, **Then** a clear "Next in series" link guides them to the following article
 4. **Given** a family needs an overview, **When** they view a journey module, **Then** all articles in the series are listed with brief descriptions
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User Story 4 - Mobile Parent Seeking Quick Information (Priority: P3)

A parent at work or traveling needs to quickly find specific information about their child's upcoming appointment or medication instructions using their mobile device.

Why this priority: Mobile access is essential for modern healthcare information, but after establishing core content and navigation (P1-P2). This ensures the foundation works before optimizing for mobile-specific scenarios.

Independent Test: Can be tested entirely on mobile devices by searching for specific information, navigating to relevant pages, and verifying readability and touch-target accessibility. Delivers value by providing anytime, anywhere access.

Acceptance Scenarios:

1. **Given** a parent accesses the site on a mobile device, **When** they view any page, **Then** content is fully readable without horizontal scrolling and touch targets are appropriately sized
 2. **Given** a parent on mobile needs to call the clinic, **When** they view the header, **Then** the phone number is prominently displayed and tap-to-call enabled
 3. **Given** a parent on mobile uses the search function, **When** they type a query, **Then** autocomplete suggestions are easily tappable and results are mobile-optimized
 4. **Given** a parent on mobile views the navigation menu, **When** they open it, **Then** all categories and subcategories are accessible without awkward scrolling or tiny text
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User Story 5 - Accessibility for Users with Disabilities (Priority: P3)

A parent with visual impairment or other disability needs to access all website information using assistive technologies like screen readers, keyboard navigation, or high-contrast mode.

Why this priority: Legal compliance and inclusivity are critical, but accessibility features can be tested and refined after core functionality is established. WCAG 2.1 AA compliance is non-negotiable but can be validated after basic features work.

Independent Test: Can be tested using screen readers (NVDA/JAWS), keyboard-only navigation, and contrast checkers. Delivers value by ensuring equal access to medical information for all families.

Acceptance Scenarios:

1. **Given** a user with visual impairment uses a screen reader, **When** they navigate the site, **Then** all content, images, and interactive elements have appropriate ARIA labels and alt text
 2. **Given** a user cannot use a mouse, **When** they navigate using keyboard only, **Then** all interactive elements are accessible via tab navigation with visible focus indicators
 3. **Given** a user with low vision, **When** they need to increase text size, **Then** they can scale fonts up to 200% without content overlap or layout breaking
 4. **Given** a user with color vision deficiency, **When** they enable high-contrast mode, **Then** all text meets WCAG 2.1 AA contrast ratios (4.5:1 for normal text, 3:1 for large text)
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User Story 6 - Staff Profile Discovery (Priority: P3)

A family wants to learn about the medical professionals who will care for their child, viewing staff credentials, specializations, and approachable personal information to build trust before appointments.

Why this priority: While important for trust-building, staff profiles support the primary content (conditions/treatments). They enhance the experience but aren't critical for the initial information-seeking journey.

Independent Test: Can be tested by navigating to staff profiles, verifying all required information displays correctly, and confirming photos and bios create an approachable yet professional impression. Delivers value by humanizing the care team.

Acceptance Scenarios:

1. **Given** a family wants to meet their care team, **When** they access the staff section, **Then** they can view profiles with friendly photos, accessible bios, and professional credentials
 2. **Given** a family is viewing a staff profile, **When** they read the biography, **Then** it balances personal approachability with professional expertise
 3. **Given** a family needs to find a specialist, **When** they browse staff profiles, **Then** specializations and areas of expertise are clearly indicated
 4. **Given** a family reads a professional article, **When** the author is a staff member, **Then** the profile is linked for additional credibility
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User Story 7 - Multilingual User Accessing Native Language Content (Priority: P2)

A Sinhala or Tamil-speaking parent whose child has been diagnosed with a kidney condition needs to access medical information in their native language to fully understand the diagnosis and treatment options.

Why this priority: Language barriers can significantly impact health literacy and patient outcomes. Providing content in users' native languages is essential for the local Sri Lankan audience but builds upon the core content structure (P1).

Independent Test: Can be tested by selecting Sinhala or Tamil language, verifying content displays correctly with proper Unicode rendering, navigating through articles, and confirming fallback to English when translations unavailable. Delivers value by making critical health information accessible to non-English speakers.

Acceptance Scenarios:

1. **Given** a Sinhala-speaking parent visits the website for the first time, **When** they select Sinhala from the language picker, **Then** the interface switches to Sinhala and their preference is saved for future visits
 2. **Given** a Tamil-speaking parent is reading an article in Tamil, **When** they navigate to related content, **Then** Tamil versions are shown when available, with clear indication if only English version exists
 3. **Given** a parent has selected Sinhala as their language, **When** they search for a medical term in Sinhala script, **Then** search returns relevant Sinhala content results with proper Unicode rendering
 4. **Given** a parent is viewing content in their selected language, **When** they switch to another language using the language switcher, **Then** the same article appears in the new language if translation exists, or shows the English version with a notification
 5. **Given** a parent is reading content with Sinhala or Tamil text, **When** they view the page on any device, **Then** fonts render correctly with proper Unicode support showing all characters clearly
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Edge Cases

- What happens when a user searches for a medical term that has multiple meanings (e.g., "stones" could refer to kidney stones or bladder stones)?
 - How does the system handle extremely long article titles or staff names that might break layouts, especially with Sinhala/Tamil text which may have different character widths?
 - What happens when a patient journey module has more than 10 articles in sequence?
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- How are articles handled when they could legitimately be categorized in multiple sections (e.g., a treatment that also discusses a specific condition)?
- What happens if a user with low bandwidth tries to load a page with multiple high-resolution images and web fonts for Sinhala/Tamil?
- How does the search function handle medical abbreviations (e.g., "CKD" vs. "chronic kidney disease") across different languages?
- What happens when a referring physician needs to access the site outside business hours for urgent referral information?
- **Resolved:** Outdated medical articles are updated in-place with prominent "Updated [date]" notice and version history visible to users; truly obsolete content (deprecated treatments, superseded protocols) is archived and replaced with 301 redirects to current replacement articles; all language versions must be synchronized when updates occur
- What happens when a user shares a URL for a specific language version (e.g., /si/conditions/nephrotic-syndrome) but the recipient has a different language preference set?
- How does the system handle mixed-language content (e.g., English medical terms within Sinhala sentences)?
- What happens if Unicode fonts fail to load on older devices or browsers?
- How are translation inconsistencies or errors reported and corrected without breaking live content?

Requirements (*mandatory*)

Functional Requirements

Content Architecture & Navigation

- **FR-001:** Website MUST organize content into three primary categories: "Kidney Conditions," "Treatments & Procedures," and "For Families & Patients"
- **FR-002:** All content MUST be clearly labeled with audience tags: "For Families" or "For Professionals"
- **FR-003:** Homepage MUST provide clear pathways to all primary categories within 3 clicks maximum
- **FR-004:** Navigation MUST be consistent across all page templates with persistent header and footer
- **FR-005:** Website MUST support at least 500+ articles without performance degradation
- **FR-005a:** Content updates MUST be handled in-place with prominent "Updated [date]" notice and accessible version history; obsolete content MUST be archived with 301 redirects to replacement articles; all language versions MUST be synchronized when content is updated or archived

Page Templates

- **FR-006:** System MUST provide a "Condition Explainer" template with sections for simple language descriptions, FAQs, visual illustrations, and support resource links
- **FR-007:** System MUST provide a "Treatment Procedure" template with child-focused experience descriptions, what-to-expect sections, and pre/post-care information
- **FR-008:** System MUST provide a "Professional Article" template with formal structure, citation sections, author credentials, and clinical detail areas
- **FR-009:** System MUST provide a "Staff Profile" template with fields for photo, approachable biography, professional credentials, specializations, and contact information

Patient Journey Module

- **FR-010:** System MUST allow grouping of related articles into sequential series called "Patient Journey Modules"
- **FR-011:** ~~Patient Journey Modules MUST display progress indicators showing user's position within the series~~ **MODIFIED:** Patient Journey Modules display series structure (e.g., "Article 2 of 5") but do NOT track or persist individual user progress across sessions for privacy compliance
- **FR-012:** Patient Journey Modules MUST provide clear "Next in series" and "Previous in series" navigation
- **FR-013:** Patient Journey Modules MUST include an overview page listing all articles in the series with brief descriptions

Search Functionality

- **FR-014:** Website MUST provide a medical-specific search function with autocomplete suggestions
- **FR-015:** Search MUST include filters for audience type ("For Families" / "For Professionals") and content categories
- **FR-016:** Search MUST recognize and handle medical abbreviations and their full-term equivalents in all supported languages using a Medical Term glossary maintained by medical staff through WordPress admin interface
- **FR-016a:** System MUST provide a Medical Term custom post type or similar editable glossary where medical staff can add, update, and remove abbreviation mappings, synonyms, and translations without technical assistance
- **FR-017:** Search autocomplete MUST display relevant suggestions after 3 characters typed
- **FR-018:** Search MUST prioritize results in the user's currently selected language
- **FR-019:** Search results MUST include an option to expand search to include content in other languages
- **FR-020:** Search MUST support Unicode input for Sinhala and Tamil scripts
- **FR-021:** When showing results from different languages, each result MUST clearly indicate its language

Accessibility Compliance

- **FR-022:** Website MUST meet WCAG 2.1 AA compliance standards
- **FR-023:** System MUST support font scaling up to 200% without content overlap or layout breaking
- **FR-024:** System MUST provide a high-contrast mode option meeting WCAG contrast ratios (4.5:1 for normal text, 3:1 for large text)
- **FR-025:** All interactive elements MUST be keyboard-navigable with visible focus indicators
- **FR-026:** All images, icons, and multimedia MUST have appropriate alt text or ARIA labels for screen readers in the content's language
- **FR-027:** Accessibility issues discovered post-launch MUST be remediated according to severity: Critical/High-severity issues (blockers preventing access) fixed within 1 week; Medium/Low-severity issues addressed within quarterly maintenance cycles; monthly accessibility audits conducted proactively to identify issues before user reports

Header & Footer Elements

- **FR-028:** Header MUST display clinic logo, main navigation menu, "Request Appointment" call-to-action button, phone number, and language switcher
- **FR-029:** Phone number in header MUST be tap-to-call enabled on mobile devices

- **FR-030:** Footer MUST include contact information, map/location link, social media links, medical disclaimer, and privacy policy link
- **FR-031:** Medical disclaimer MUST be globally customizable via Customizer option with multilingual support through Polylang string translation and automatically appear on all pages in all supported languages

Visual Design & Brand Identity

- **FR-032:** Website MUST use a color palette of calming blues, soft greens, and muted teals with ample white space (specific hex values to be defined in design deliverables)
- **FR-033:** Typography MUST use modern sans-serif fonts with clear visual hierarchy; English content uses Latin sans-serif, Sinhala and Tamil content use web fonts loaded from CDN (e.g., Google Fonts) with system font fallbacks
- **FR-034:** All fonts MUST support full Unicode character sets for their respective scripts to ensure proper rendering of medical terminology
- **FR-035:** Website MUST use optimistic, diverse, non-clinical photography throughout
- **FR-036:** Icons MUST be simple, friendly, and consistent with the overall design language

Content Readability

- **FR-037:** Patient/family-focused content MUST maintain Flesch-Kincaid reading level between 8.0-9.5 grade level for English content
- **FR-038:** Sinhala and Tamil family-focused content MUST maintain equivalent readability levels appropriate for general adult audiences
- **FR-039:** Medical terms in family content MUST include clear, simple definitions or tooltips in the content's language
- **FR-040:** Content MUST maintain a professional, empathetic, and reassuring tone across all languages

Mobile Responsiveness

- **FR-041:** Website MUST be fully responsive across all device sizes (mobile phones, tablets, desktops)
- **FR-042:** Touch targets on mobile MUST be minimum 44x44 pixels for comfortable tap interaction
- **FR-043:** Mobile navigation MUST provide easy access to all categories (accessible within 2 vertical swipes on 375px viewport) without requiring excessive scrolling

Multilingual Support

- **FR-044:** Website MUST support three languages: English, Sinhala, and Tamil with full Unicode support
- **FR-045:** Language switcher MUST be prominently displayed in the header on all pages with prominent first-visit prompt UI to select preferred language
- ~~**FR-046:** User's language preference MUST be saved in browser storage (cookie/localStorage) and persist across sessions~~ **REMOVED:** No persistent storage of user preferences; language selection persists only for current browser session via sessionStorage to ensure maximum privacy compliance
- **FR-047:** All content types (articles, navigation, UI elements, forms, error messages) MUST be translatable

- **FR-048:** URLs MUST include language identifier (e.g., /en/, /si/, /ta/) for proper content indexing and sharing
- **FR-049:** When content is unavailable in user's selected language, system MUST automatically fall back to English version with visible notification
- **FR-050:** Language switcher MUST indicate which languages have translations available for the current page (e.g., grayed out or badge showing "English only")
- **FR-051:** Content publishing workflow MUST allow publishing English content first, with translations added incrementally

Performance

- **FR-052:** Pages MUST load within 3 seconds on 5 Mbps broadband connections (as per SC-007)
- **FR-053:** Images MUST be optimized for web delivery with appropriate compression and responsive sizing
- **FR-054:** Website MUST handle high-resolution images without causing excessive bandwidth usage
- **FR-055:** Web fonts for Sinhala and Tamil MUST load asynchronously using font-display: swap to prevent blocking page render; system fonts render immediately and swap to web fonts when loaded to prevent FOIT (Flash of Invisible Text)

Key Entities

- **Content Article:** Represents any piece of medical information content; attributes include title, body content, language code (en/si/ta), audience tag (Family/Professional), category assignment, author, publication date, last updated date, version history, reading level, associated media, and links to translation IDs (references to same article in other languages)
- **Patient Journey Module:** A collection of related articles organized in sequence; attributes include journey title, description, language code, list of associated articles in order, estimated completion time, target audience, and links to translation IDs
- **Staff Profile:** Represents individual care team members; attributes include name, photo, biography (personal and professional sections), language code, credentials, specializations, contact information, authored articles, and links to translation IDs
- **Content Category:** Organizational structure for content; attributes include category name, description, icon, language code, parent category (if subcategory), audience type, and links to translation IDs
- **Medical Term:** Glossary entries for medical terminology managed by medical staff; attributes include term, abbreviations/synonyms (for search mapping), simple definition, technical definition, language code, related articles, pronunciation guide, and links to translation IDs; editable through WordPress admin interface without technical assistance
- **Support Resource:** External or internal resources for families; attributes include resource name, type (support group, educational material, external link), description, language code, associated conditions/treatments, and links to translation IDs

Success Criteria (*mandatory*)

Measurable Outcomes

User Experience & Navigation

- **SC-001:** Parents can find information about a specific kidney condition within 3 clicks from the homepage
- **SC-002:** 90% of parents can successfully complete their primary information-seeking task on first visit without external assistance
- **SC-003:** Average time to find and begin reading a relevant article is under 2 minutes

Content Accessibility & Readability

- **SC-004:** All patient/family content maintains Flesch-Kincaid reading level between grade 8-9
- **SC-005:** 100% of content meets WCAG 2.1 AA accessibility standards as verified by automated and manual testing
- **SC-006:** Users can successfully scale text to 200% while maintaining full functionality and readability

Performance

- **SC-007:** Page load time averages 3 seconds or less across all templates on standard broadband (5 Mbps)
- **SC-008:** Mobile page load time on 4G connection is under 4 seconds
- **SC-009:** Website maintains performance with 500+ published articles and handles 1000+ concurrent users during peak hours

Search & Discoverability

- **SC-010:** Search function returns relevant results within 1 second of query submission
- **SC-011:** 85% of search queries return at least one relevant result on the first results page
- **SC-012:** Autocomplete suggestions appear within 0.5 seconds of typing

Mobile Experience

- **SC-013:** Mobile users can complete the same information-seeking tasks as desktop users with equal success rates
- **SC-014:** Tap-to-call functionality works on 100% of mobile devices and browsers
- **SC-015:** Mobile navigation can be completed without horizontal scrolling on devices as small as 320px width

Patient Journey Completion

- **SC-016:** 70% of users who start a Patient Journey Module complete at least 3 articles in the series
MODIFIED: Analytics shows aggregate patterns of article views within journey modules (measured via page view sequences in anonymous analytics, not individual user tracking)
- **SC-017:** Users navigating Patient Journey Modules report reduced anxiety about upcoming procedures (measured via optional feedback)

Professional User Satisfaction

- **SC-018:** Referring physicians can find referral process information within 2 minutes of site visit
- **SC-019:** Professional content provides sufficient clinical detail that 80% of physicians don't need to contact clinic for clarification

Content Management

- **SC-020:** Clinic staff can publish new content or update existing content without technical assistance
- **SC-021:** Medical disclaimer can be updated globally and appear on all pages within 1 minute of publishing

Design & Brand Consistency

- **SC-022:** 90% of user feedback indicates the website feels professional yet approachable
- **SC-023:** Visual design creates a calming, reassuring impression as validated by user testing
- **SC-024:** Brand identity is consistently applied across all page templates and content types

Multilingual Experience

- ~~**SC-025:** Users can successfully switch between languages with language preference persisting across sessions~~ **MODIFIED:** Users can successfully switch between languages with selection persisting only within current browser session for privacy compliance
- **SC-026:** Sinhala and Tamil text renders correctly with proper Unicode support on all major browsers and devices
- **SC-027:** Language fallback notifications are clearly visible when content is not available in user's selected language
- **SC-028:** Search returns relevant results within 1 second regardless of input language (English, Sinhala, or Tamil)
- **SC-029:** Content translation workflow allows publishing English content and adding translations within same day without technical issues

Assumptions

- **Platform:** WordPress CMS will be used as the underlying platform with custom theme development
- **Content Management:** Clinic has dedicated staff responsible for content creation and maintenance
- **Initial Content:** Clinic will provide initial content for at least 50 core condition and treatment articles
- **Photography:** Stock photography or professionally commissioned photos will be used (not patient photos due to privacy concerns)
- **Hosting:** Standard commercial web hosting with adequate resources for traffic expectations
- **Languages:** Website supports English, Sinhala, and Tamil with Unicode support; content must be translated and maintained in all three languages
- **Authentication:** No user accounts or login functionality required; all content is publicly accessible
- **Privacy Policy:** No persistent user data storage (no cookies, localStorage, or server-side tracking of individual users); language selection and journey navigation persist only within current browser session; analytics tracks only aggregate, anonymized patterns
- **Appointment Booking:** "Request Appointment" CTA links to external booking system or contact form, not integrated booking
- **Medical Accuracy:** All content will be reviewed and approved by qualified medical professionals before publication
- **Update Frequency:** Content will be reviewed and updated at least annually to maintain medical accuracy
- **Analytics:** Standard web analytics tools will be integrated to track user behavior and measure success criteria

- **Browser Support:** Modern browsers (Chrome, Firefox, Safari, Edge) current version and one version back; Internet Explorer not required
- **Geographic Audience:** Primary audience is local/regional, though content is accessible globally
- **Social Media Integration:** Social media links are outbound only; no social login or commenting features required

Dependencies

- **Content Creation:** Requires medical professionals to write, review, and approve all clinical content
- **Content Translation:** Requires professional medical translators fluent in English, Sinhala, and Tamil to translate all content while maintaining medical accuracy
- **Design Assets:** Requires professional photography, custom iconography, and visual design mockups before development
- **Branding Guidelines:** Clinic must provide or approve color palette, logo usage, and brand voice guidelines
- **Hosting Environment:** Requires WordPress-compatible hosting environment with adequate PHP/MySQL support and Unicode UTF-8 character encoding
- **Legal Review:** Medical disclaimer and privacy policy require legal review and approval before launch in all three languages
- **External Systems:** If appointment booking integrates with external calendar systems, API access and documentation required
- **Search Functionality:** May require WordPress search enhancement plugin or custom search implementation
- **Accessibility Testing:** Requires access to screen readers and accessibility testing tools for WCAG validation
- **Performance Testing:** Requires tools and methodology for measuring page load times and concurrent user handling
- **SEO Requirements:** If search engine visibility is priority, requires SEO best practices integration
- **Analytics Setup:** Requires Google Analytics or similar tool configuration for measuring success criteria

Constraints

- **Reading Level Requirement:** All family-focused content must maintain grade 8-9 reading level, which may limit medical terminology usage and require careful content writing
- **Accessibility Compliance:** WCAG 2.1 AA is non-negotiable, which constrains design choices (color combinations, contrast ratios, interaction patterns); ongoing maintenance requires monthly audits and defined remediation timelines based on severity
- **Performance Target:** 3-second page load time limits image sizes, animation complexity, and third-party script usage
- **Mobile-First Design:** Must work on devices as small as 320px wide, constraining layout complexity and information density
- **Medical Accuracy:** All content requires professional review, potentially slowing content publishing workflow
- **Privacy Regulations:** Patient testimonials, photos, or case studies require strict HIPAA/privacy compliance

- **Brand Consistency:** Visual design must balance professional medical credibility with approachable family-friendly aesthetic
- **Dual Audience:** Must serve both lay audiences (parents) and professional audiences (physicians) with distinct information needs
- **Content Scalability:** Must support 500+ articles, requiring careful information architecture and search functionality
- **No Patient Data:** Website cannot store personal health information, limiting interactive features like personalized treatment tracking

Out of Scope

- **Patient Portal:** User accounts, login functionality, personal health records, or appointment history viewing
- **E-commerce:** No billing, payment processing, or online pharmacy features
- **Telehealth:** No video consultations, chat features, or virtual appointment functionality
- **Community Features:** No patient forums, comment sections, or social networking features
- **Prescription Management:** No prescription refills, medication tracking, or pharmacy integration
- **Interactive Tools:** Medical calculators, symptom checkers, or diagnostic tools (liability concerns)
- **Email Marketing:** Newsletter subscriptions, automated patient communication, or marketing automation
- **Geolocation Features:** Automatic location detection, multiple clinic locations, or geographic routing
- **A/B Testing:** Built-in testing framework for design or content variations
- **Custom CMS:** Development of proprietary content management system (using WordPress instead)
- **Native Mobile Apps:** iOS or Android applications (responsive web only)
- **Real-time Chat:** Live chat support or chatbot functionality
- **Integration with EHR:** Electronic health record system integration or data exchange
- **Appointment Scheduling:** Direct booking calendar integration (links to external system only)

Risks

1. **Medical Content Accuracy:** Risk that outdated or inaccurate medical information could harm patient care decisions
 - *Mitigation:* Implement regular content review schedule, version control for articles, and clear last-updated dates
2. **Accessibility Compliance Failure:** Risk of not meeting WCAG 2.1 AA standards could result in legal liability and exclude users with disabilities
 - *Mitigation:* Conduct accessibility audits throughout development, use automated testing tools, and engage users with disabilities for testing
3. **Poor Reading Level:** Risk that family content is too complex, alienating primary audience
 - *Mitigation:* Use readability checkers during content creation, test with representative parents, and maintain editorial standards

4. **Search Inadequacy:** Risk that medical search doesn't handle terminology variations, making content undiscoverable
 - *Mitigation:* Build comprehensive synonym list, test search with real user queries, implement robust medical abbreviation handling
5. **Performance Degradation:** Risk that adding 500+ articles causes slow page loads and poor user experience
 - *Mitigation:* Implement caching strategies, optimize images, use content delivery network (CDN), and conduct performance testing at scale
6. **Mobile Usability Issues:** Risk that complex medical information is difficult to consume on small screens
 - *Mitigation:* Prioritize mobile-first design, test on variety of devices, simplify navigation, and use progressive disclosure patterns
7. **Audience Confusion:** Risk that parents accidentally read professional content or physicians miss family-oriented explanations
 - *Mitigation:* Use clear visual distinctions, prominent audience labels, separate navigation paths, and filtered search
8. **Content Management Complexity:** Risk that clinic staff find WordPress theme too complex to update content
 - *Mitigation:* Provide training, create documentation, use intuitive custom fields, and establish content templates
9. **Brand Inconsistency:** Risk that balancing "professional medical" with "family-friendly" results in unclear brand identity
 - *Mitigation:* Develop comprehensive style guide, create design system, conduct user perception testing, and maintain strict design review
10. **Privacy Violations:** Risk of inadvertently displaying patient information in photos, testimonials, or case studies
 - *Mitigation:* Establish clear content guidelines, require releases, use stock photos, anonymize all examples, and conduct privacy audits
11. **Translation Quality Issues:** Risk that poor translations lead to medical misunderstandings or loss of meaning in Sinhala/Tamil content
 - *Mitigation:* Use professional medical translators, implement review process by bilingual medical staff, maintain glossary of medical terms, and collect user feedback on translation quality
12. **Unicode Rendering Failures:** Risk that Sinhala/Tamil characters don't display correctly on some devices or browsers

- *Mitigation:* Test extensively across devices and browsers, implement robust font fallbacks, use web font CDN with high availability, and provide system font alternatives
13. **Content Synchronization Lag:** Risk that English content updates are not promptly translated, creating information gaps between languages
- *Mitigation:* Establish translation workflow with defined SLAs, use content versioning to track translation status, display last-updated dates per language, and prioritize critical medical updates
14. **Search Performance with Multiple Languages:** Risk that search functionality degrades when indexing content in three different scripts
- *Mitigation:* Optimize database indexing for Unicode, implement language-specific search algorithms, use dedicated search service if needed, and conduct performance testing with multilingual data

Success Metrics Collection Method

- **Analytics Integration:** Google Analytics or similar tool configured to track page views, time on page, bounce rates, and conversion flows, segmented by language
- **User Testing:** Conduct moderated usability sessions with 5-10 parents (including Sinhala and Tamil speakers) and 3-5 referring physicians during development and post-launch
- **Accessibility Audits:** Use automated tools (WAVE, axe DevTools) plus manual screen reader testing and keyboard navigation verification across all languages; conduct monthly audits post-launch to proactively identify issues; categorize issues by severity (Critical/High/Medium/Low) and track remediation timelines
- **Performance Monitoring:** Use Google PageSpeed Insights, WebPageTest, and server monitoring tools to track load times including web font loading for Sinhala/Tamil
- **Search Analytics:** Track search queries, click-through rates on results, and zero-result searches to identify content gaps, segmented by language
- **Reading Level Verification:** Use Flesch-Kincaid readability tools for English content during content creation and periodic audits; use equivalent readability assessment for Sinhala/Tamil
- **Feedback Collection:** Optional feedback forms on articles asking "Was this helpful?" and "What could be improved?" in all three languages
- **Physician Surveys:** Email survey to referring physicians 3 months post-launch asking about usefulness and content quality
- **Content Management Tracking:** Monitor time required to publish/update content including translation workflow and staff satisfaction with CMS workflow
- **Mobile Analytics:** Segment analytics by device type to compare mobile vs. desktop performance and behavior
- **Language Usage Analytics:** Track language selection patterns, language switching behavior, and fallback notification views
- **Translation Quality Monitoring:** Collect user-reported translation issues, track translation completion rates, and monitor time lag between English publication and translation availability

Deliverables

Design Deliverables

1. Sitemap and Information Architecture

- Visual sitemap showing all primary pages and navigation hierarchy
- Content category taxonomy with parent-child relationships
- User flow diagrams for key scenarios (parent finding condition info, physician accessing referral process)

2. Wireframes

- Homepage wireframe showing hero section, category entry points, featured content, and calls-to-action
- Condition Explainer template wireframe with all content sections
- Professional Article template wireframe showing clinical structure
- Staff Profile template wireframe with photo, bio, and credentials layout
- Patient Journey Module overview and individual article wireframes
- Mobile wireframes for all above templates

3. Style Guide

- Color palette with primary, secondary, and accent colors (specific hex values)
- Typography system including font families, sizes, weights, and line heights for all hierarchy levels
- UI element library including buttons, form fields, cards, icons, and navigation components
- Image style guidelines (photography direction, illustration style, icon design)
- Spacing and grid system specifications
- Accessibility annotations (contrast ratios, focus states, ARIA patterns)

4. High-Fidelity Mockups

- Homepage design showing full visual design application
- One complete Condition Explainer page with real content
- One complete Professional Article page with clinical content
- Staff Profile page with example staff member
- Patient Journey Module overview page
- Mobile versions of all above pages

Feature Specifications

5. Patient Journey Module Specification

- Detailed functional requirements for article grouping and sequencing
- Progress indicator design and logic
- Navigation patterns (next/previous, overview return)
- Content management workflow for creating and editing journey modules
- Technical considerations for implementation

6. Search Functionality Specification

- Autocomplete behavior and suggestion logic
- Filter implementation (audience, category)
- Medical abbreviation handling and synonym management
- Search results page layout and ranking criteria
- Performance requirements for search queries

7. Accessibility Implementation Guide

- WCAG 2.1 AA requirements mapped to specific design elements
- ARIA label and role specifications for custom components
- Keyboard navigation flow and focus management rules
- Screen reader testing checklist
- High-contrast mode specifications

8. Content Management Documentation

- WordPress custom post types and taxonomies structure
- Custom fields for each template type
- Content editor workflow and publishing process
- Medical disclaimer management system
- Content review and update workflow

Technical Deliverables

9. WordPress Theme Structure

- Theme file organization and template hierarchy
- Custom post types for articles, staff profiles, journey modules
- Custom taxonomies for categories, audience tags, specializations
- Plugin dependencies and recommendations

10. Performance Optimization Plan

- Image optimization strategy and responsive image implementation
- Caching approach (browser caching, object caching, page caching)
- Content delivery network (CDN) integration
- Database query optimization for large content volume
- Loading strategy for scripts and styles

11. Testing Plan

- Browser and device testing matrix
- Accessibility testing checklist and tools
- Performance testing methodology
- Content management workflow testing
- User acceptance testing scenarios

12. Launch Checklist

- Pre-launch technical verification items

- Content readiness checklist
- Legal review requirements (disclaimer, privacy policy)
- Analytics configuration steps
- Post-launch monitoring plan