# MediQ – TEST PLAN

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| Version: | [v1.0] | Date: | [2025‑05‑27] |
| Authors: | Stanislav Chirikov (Project Manager), Deen Adenowo (QA Lead), Leigh Balite (Front-End Developer), Hamza Teli (Back-end Developer, Jordan Purcell (Back-end Developer) Matthew MacLennan (Database Administrator) | | |

## 1. Purpose & Objectives

This test plan defines the scope, strategy, schedule, and deliverables for validating the MediQ web application before its public launch in **August 2025**. It will ensure the platform is functional, secure, and accessible for Ontarians seeking real-time healthcare wait-time data.

**Success Criteria**

* Real-time wait times refresh ≤ 3 minutes.
* Page load ≤ 5s on broadband;
* API performance: P95 ≤ 2s under 200 RPS (Requests Per Second).
* Availability: 99.9% uptime in a 30-day rolling window.
* Wait time accuracy: ≥ 90% match between displayed and verified facility wait times.
* All Critical/High defects resolved
* Formal sponsor UAT (User Acceptance Testing) sign-off obtained.

## 2. Scope

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| --- | --- |
| **In Scope** | **Out of Scope** |
| Location-based search (postal code & geolocation) | Ongoing maintenance and support after project launch |
| Interactive map & list sync | Integration with private healthcare databases beyond government-regulated facilities |
| Wait-time submission (user + provider) | Marketing and promotional activities for system adoption |
| Admin dashboard (CRUD, CSV upload) | Development of a native mobile application |
| Performance, security, accessibility (AODA) tests | Long-term operational support beyond the initial rollout phase |

## 3. Test Items

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Item / Module** | **Version / Build** | **Source Document** |
| TI-01 | API Gateway & Auth Service | Build-0.9 | WBS 1.2.2 |
| TI-02 | Wait-time Micro-service | Build-0.9 | WBS 1.2.2 |
| TI-03 | Front-End React UI | Build-0.9 | WBS 1.2.1 |
| TI-04 | Admin Dashboard | Build-0.8 | WBS 1.2.3 |
| TI-05 | MySQL Database Schema | Rev 0.8 | Arch Doc v0.8 |

## 4. Features to Be Tested

* Location-based search (postal code & geolocation)
* Map-card synchronization
* User wait-time submission form
* Admin data override dashboard
* Historical wait-time chart
* Authentication / RBAC
* Accessibility (AODA) compliance

## 5. Features Not to Be Tested

* Marketing splash pages
* Future analytics/reporting dashboard (Phase 2)
* SMS / push-notification concepts under research

## 6. Test Strategy / Approach

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| --- | --- | --- |
| **Test Type** | **Description** | **Technique / Tools** |
| Unit | Validate individual functions & utils | Jest |
| Integration | API ↔ DB ↔ UI flows | Postman |
| System | End‑to‑end user scenarios | Selenium, Playwright |
| Performance | Response ≤ 2 sec under 200 RPS | JMeter, k6 |
| Security | OWASP top‑10 scan, PHIPA compliance | OWASP ZAP |
| Accessibility | WCAG 2.1 & AODA checks | NVDA |
| UAT | Stakeholder acceptance | TestLink |

## 7. Test Environment

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| --- | --- |
| Layer | Details |
| Hardware | Vercel/Cyclic Serverless Hosting |
| Software | OS, browser matrix, database version |
| Tools | GitHub Actions CI, Allure reports |

## 8. Roles & Responsibilities

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| --- | --- | --- |
| **Role** | **Name(s)** | **Responsibility** |
| Project Manager | Stanislav Chirikov | Approvals, risk escalation |
| QA Lead | Deen Adenowo | Owns plan, reporting |
| Backend Developer | Jordan Purcell, Hamza Teli | Fixes API defects |
| Database Administrator | Matthew MacLennan | Fix database related issues |
| Frontend Developer | Leigh Balite | Fix UI issues |

## 9. Schedule & Milestones

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| --- | --- | --- |
| **Milestone** | **Planned Date** | **Owner** |
| Test Plan Approved | May 27 | PM |
| Environment Ready | June 10 | DevOps |
| Unit & Integration Testing Start | June 15 | Dev Team |
| System Test Start | July 1 | QA Team |
| Security Test | July 25 | Security Team |
| UAT Start | Aug 1 | Project Sponsor |
| Go/No‑Go | Aug 10 | Steering Commitee |

## 10. Entry / Exit Criteria

* Entry:
* All features developed
* Test environment setup
* Test cases are reviewed and approved
* Code complete for targeted sprint
* All blocker defects closed
* Exit:
* All critical and major bugs resolved
* UAT sign-off received
* Performance targets are met
* Application meets compliance requirements
* ≥ 95 % test cases pass
* No open Critical / High defects
* UAT sign‑off received

## 11. Deliverables

* Test cases & scripts (TestRail export)
* Automated test reports (CI pipeline)
* Defect log (Jira)
* Final Test Summary Report

## 12. Risks & Mitigations

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| --- | --- | --- | --- |
| Risk | Impact | Likelihood | Mitigation |
| Unstable test data | High | Medium | Daily DB snapshot refresh |
| Delays in test environment availability | High | Medium | Establish environment readiness checklist; allocate buffer time in schedule |
| Third party API dependencies (Google Maps) failing during testing | High | Medium | Mock API responses for fallback testing procedures |
| Performance targets not met under load | Critical | Medium | Conduct incremental performance testing starting early; allocate contingency time for tuning |
| Insufficient test coverage for edge cases | Medium | Medium | Conduct risk-based test case prioritization |
| Security vulnerabilities identified late in cycle | Critical | Low | Integrate OWASP scans into CI pipeline; conduct security testing in parallel with functional testing |
| Accessibility (AODA) compliance gaps | High | Medium | Include accessibility checks in all test cycles; use automated tools alongside manual reviews |

## 13. Approval

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| --- | --- | --- |
| Role | Name | Signature / Date |
| QA Lead | Deen Adenowo |  |
| Project Manager | Stanislav Chirikov |  |
| Sponsor | Ministry of Health Representative |  |