

# Technical Annex – HealthBridge Prototype

*Supporting Evidence for TRL-4 Functionality*

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**Repository:** <https://github.com/nydiokar/HealthBridge>

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## 1. Prototype Overview

The HealthBridge prototype demonstrates an end-to-end workflow for rural GP support in the Devetaki Plateau. At TRL-4, it validates the core system functions with seeded data and a working interface.

### Current capabilities:

- **Citizen intake form (web/tablet):** structured symptom capture.
- **Rule-based triage engine:** assigns urgency (red/yellow/green) with reasoning.
- **GP dashboard:** prioritised case lists with continuity of records.
- **Database layer:** secure storage of cases, timestamps, user roles, and anonymised statistics.

### Design attributes:

- Low-bandwidth operation.
  - GDPR-compliant elements (consent, role-based access, anonymisation in demo).
  - Offline-tolerant (basic caching, planned sync upgrade).
  - Modular stack: Express/React/SQLite with open-source components.
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## 2. Screenshots

### 2.1 Citizen Intake Form

[Structured form for symptoms such as fever, pain level, and allergies.](#) (click for full screen)

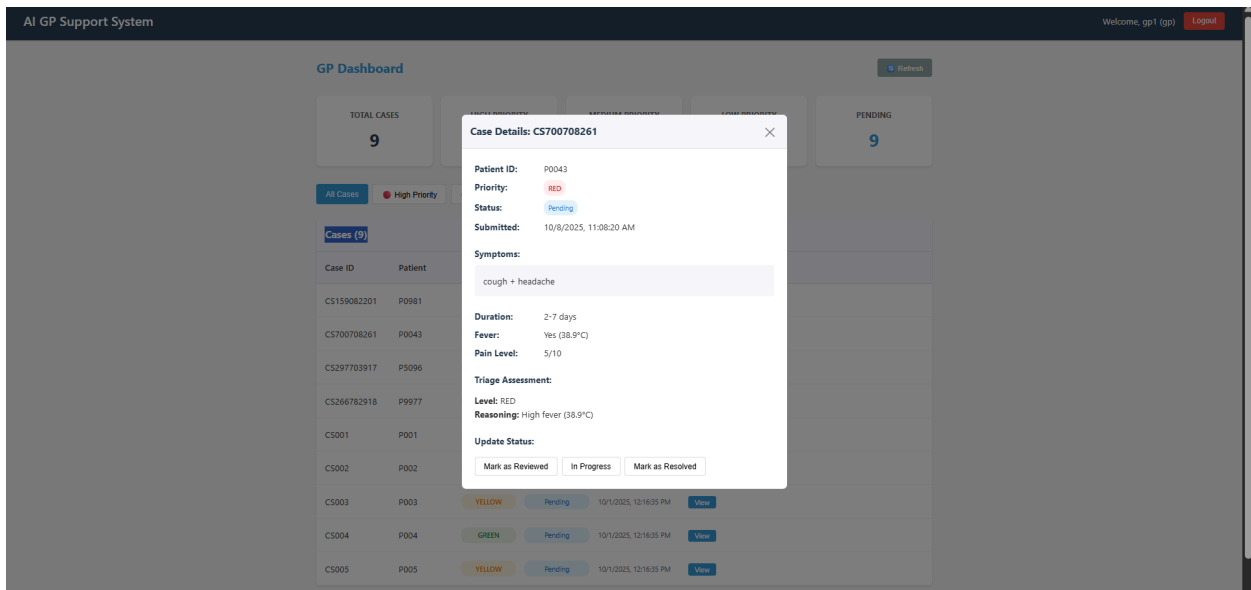
The screenshot shows the 'Health Concern Submission' form within the 'AI GP Support System' interface. The header bar includes 'AI GP Support System' on the left and 'Welcome, citizen1 (citizen) Logout' on the right. The form itself is titled 'Health Concern Submission' and includes a sub-header: 'Please describe your health concerns. All information will be reviewed by a healthcare professional.' The form fields are as follows: a text area for 'Describe your symptoms: \*' containing 'cough + headache' with a '17/500 characters' indicator; a dropdown menu for 'How long have you had these symptoms? \*' set to '2-7 days'; a checkbox for 'I have a fever' which is unchecked; a 'Pain level (0 = no pain, 10 = severe):' slider set to '4/10' with 'Moderate pain' text; a text field for 'Known allergies (optional):' containing 'polens'; a consent checkbox 'I consent to processing my health data for triage purposes' which is checked; a green 'Submit Health Concern' button; and a green confirmation message at the bottom: 'Your information is secure and will only be shared with authorized healthcare professionals.'

[Confirmation of case submission](#) (click for full screen)

The screenshot shows the 'Case Submitted Successfully' confirmation screen within the 'AI GP Support System' interface. The header bar is identical to the previous screenshot. The main content area features a green checkmark icon and the title 'Case Submitted Successfully'. Below this, a light purple box displays the following information: 'Case ID: CS700708261', 'Patient ID: P0043', and 'Priority Level: RED'. A section titled 'What happens next?' states: 'Your case has been reviewed and prioritized. A healthcare professional may contact you based on the urgency level.' Below this are two warning boxes: an orange one stating 'Important: This is advisory only, not a medical diagnosis. In an emergency, call 112.' and a red one stating 'High Priority: Please seek immediate medical attention or contact emergency services if your condition worsens.' At the bottom of the form is a blue 'Submit Another Case' button. The footer of the page reads 'AI GP Support System - Prototype'.

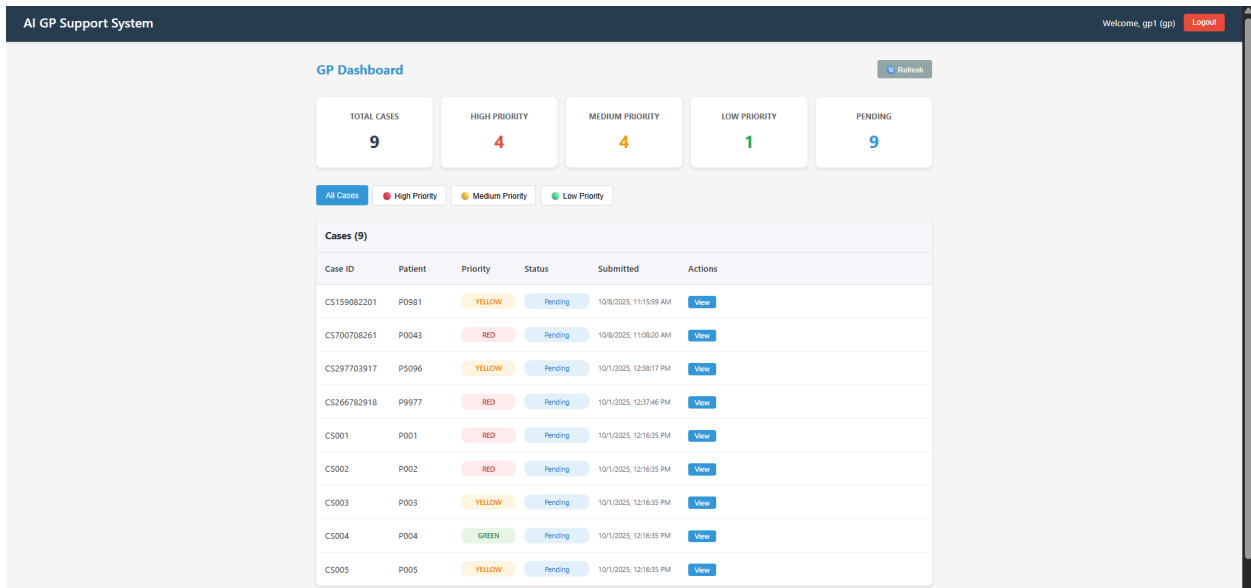
## 2.2 Triage Result

[Example of urgent case flagged “RED” with explanatory reasoning.](#) (click for full screen)



## 2.3 GP Dashboard

[Secure dashboard with prioritised lists by urgency, submission time, and status.](#) (click for full screen)



### 3. Demonstration

**Demo sequence:**

1. Log in as citizen and submit a case (e.g. *“High fever and persistent cough”*).
2. System generates a triage result (e.g. “RED – high fever”).
3. Log in as GP → dashboard shows case in prioritised list.

**Video demonstration:**

A short video walkthrough (2 minutes) illustrates the above sequence.

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### 4. Evidence of TRL-4

- Functional workflow demonstrated: intake → triage → GP dashboard.
  - Validated with test cases across urgency categories (red, yellow, green).
  - Screenshots and demo video provided as supporting material.
  - Source code openly available with installation instructions.
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### 5. Next Steps Towards TRL-6

- Integration of ML-assisted triage alongside rules.
  - Enhanced offline support (store-and-sync).
  - Expanded security hardening (HTTPS, encryption, sessions).
  - Full training materials and replication kit for rural deployment.
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