

Agenda

Introduction

KPIs/Objectives

Existing Method

Proposed Workflow

Overview of App Screens

App Development Approach

App Development Outlook

App Deployment

Future Steps

Key Performance Indicators



The Seven Key Principles



1) Regional Governance



2) Coordination Through A Regional Multi-disciplinary Team (MDT) And A Multi Disciplinary Meeting (MDM)



3) Regional Rota & Single Point Of Contact



4) Timely And Reliable Image Transfer



5) Safe Transfer



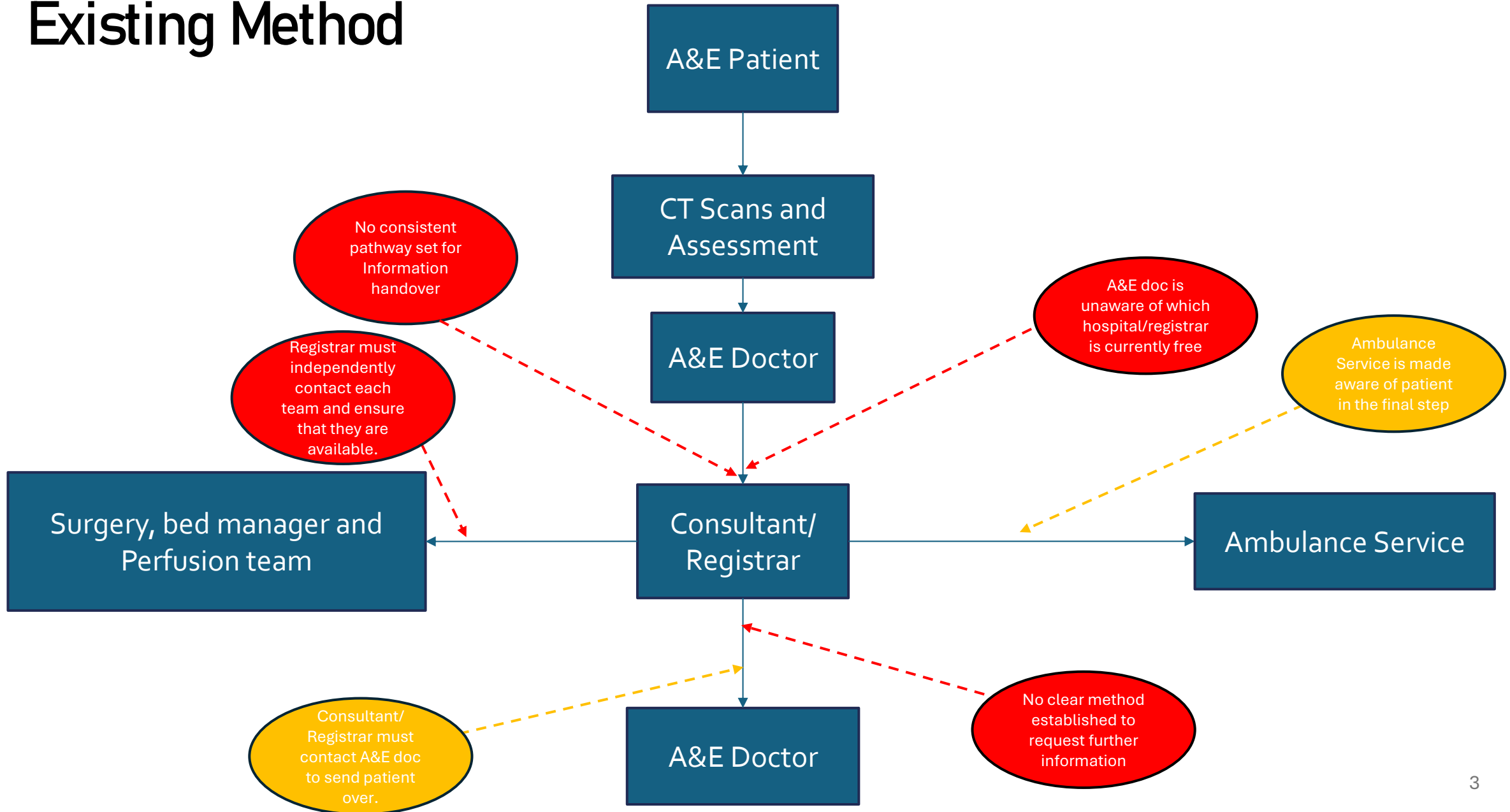
6) Specialist Treatment For All Acute Aortic Dissections



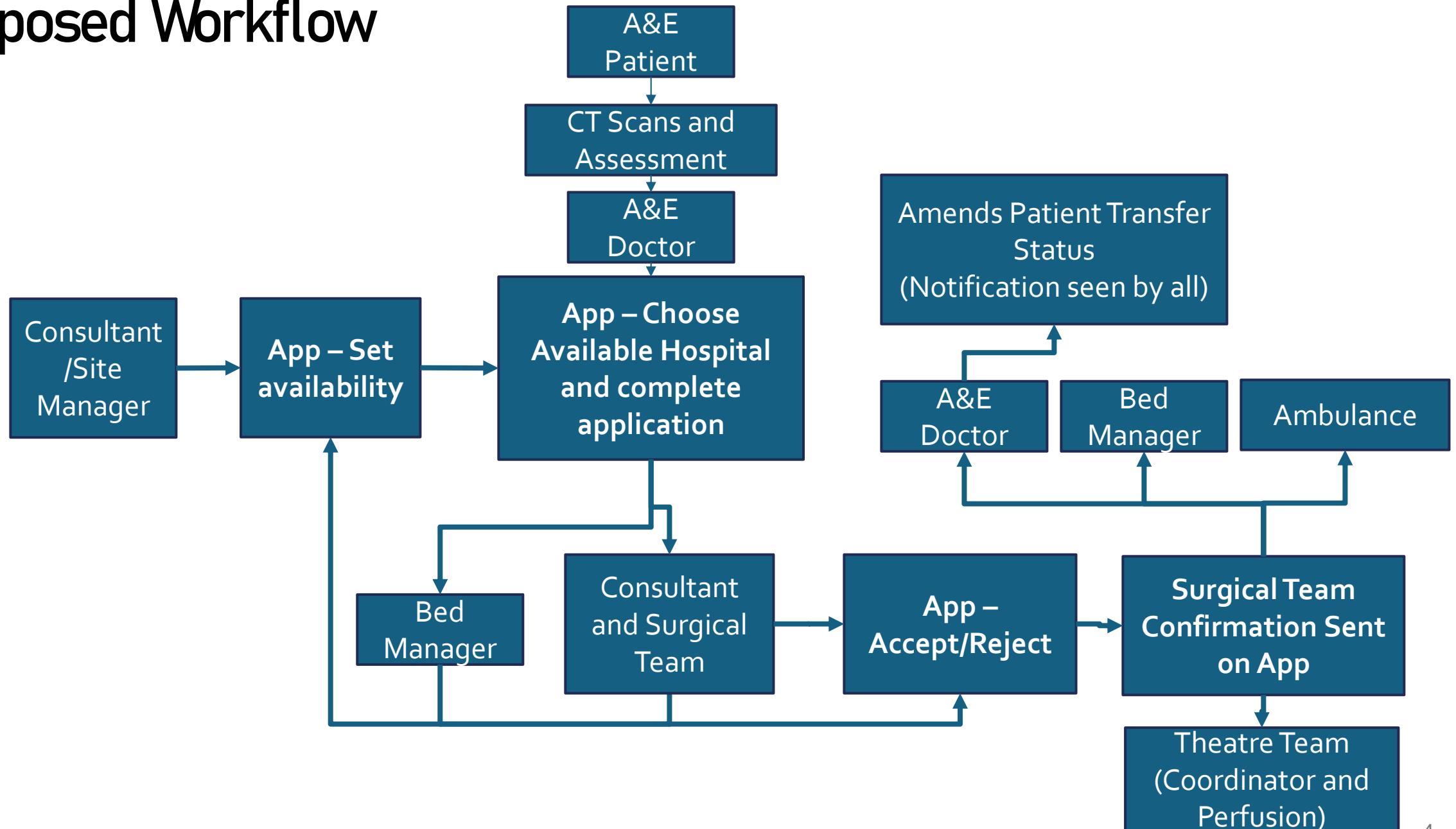
7) A Regional Education Programme



Existing Method



Proposed Workflow



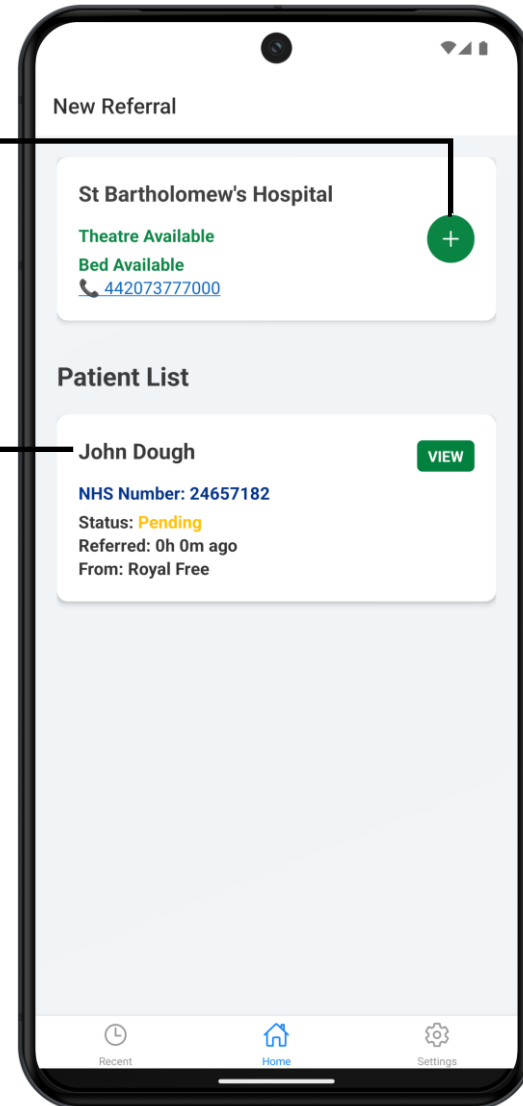
A&E Doctor

Create New Referrals

Shows first available hospital according to rota

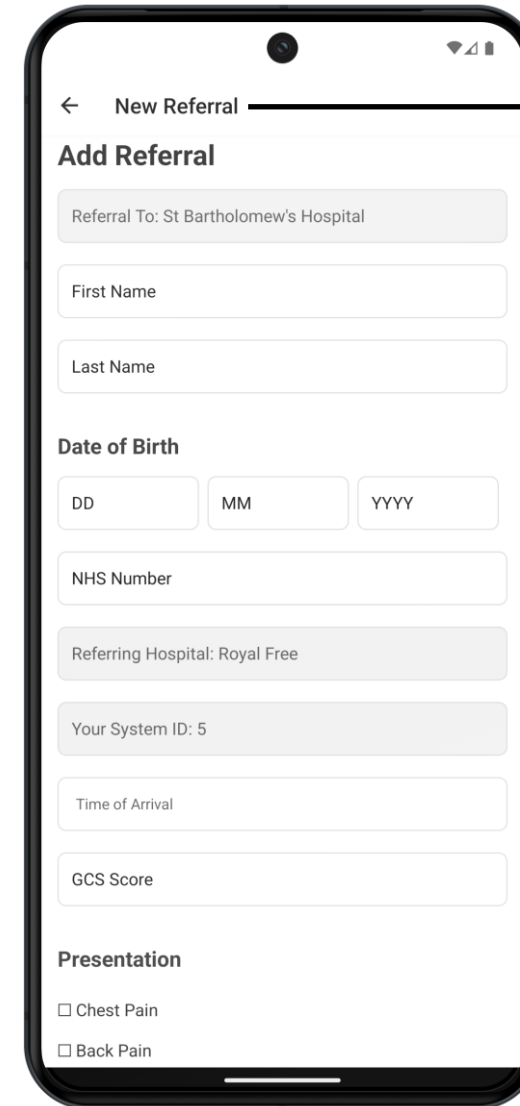
View Referred Patients

Referral status updates once patient accepted.



The 'A&E Doctor's Home View' is a mobile app interface. At the top, it says 'New Referral'. Below this is a card for 'St Bartholomew's Hospital' with a green plus icon. The card lists 'Theatre Available', 'Bed Available', and a phone number '442073777000'. Below the hospital card is a 'Patient List' section. The first patient listed is 'John Dough' with a green 'VIEW' button. Below the patient name, it shows 'NHS Number: 24657182', 'Status: Pending', 'Referred: 0h 0m ago', and 'From: Royal Free'. At the bottom of the screen is a navigation bar with three icons: 'Recent', 'Home', and 'Settings'.

A&E Doctor's Home View



The 'New Referral Form Submission' screen is a mobile app interface. At the top, it says 'New Referral' with a back arrow. Below this is a section titled 'Add Referral'. The form contains several fields: 'Referral To: St Bartholomew's Hospital' (a greyed-out field), 'First Name' (a text input field), 'Last Name' (a text input field), 'Date of Birth' (three input fields for DD, MM, and YYYY), 'NHS Number' (a text input field), 'Referring Hospital: Royal Free' (a greyed-out field), 'Your System ID: 5' (a greyed-out field), 'Time of Arrival' (a text input field), and 'GCS Score' (a text input field). Below these fields is a section titled 'Presentation' with two checkboxes: 'Chest Pain' and 'Back Pain'.

New Referral Form Submission

New Referral Form

A&E clinician submits patient presentation and history.

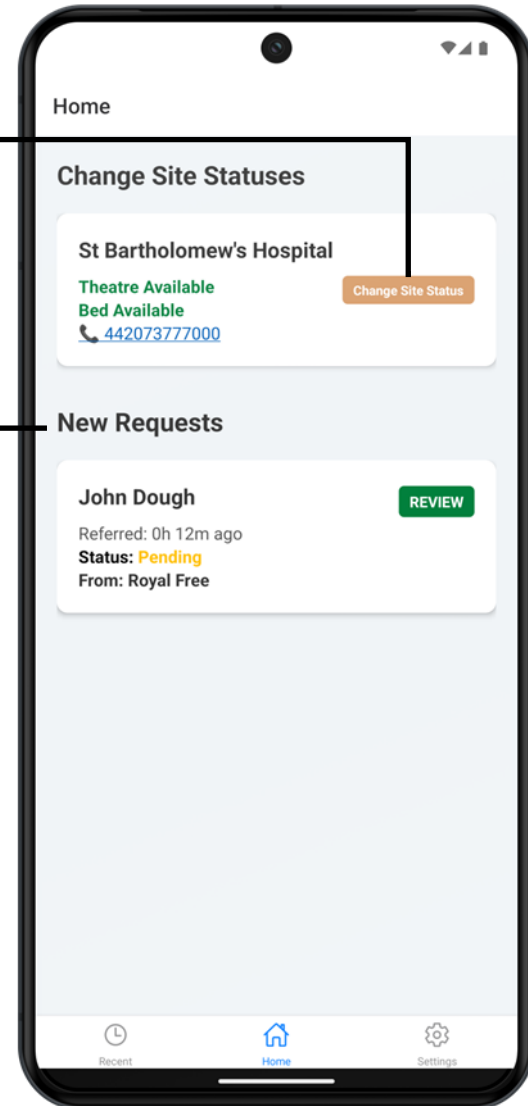
Surgical Consultant & Registrar

Change Site Status

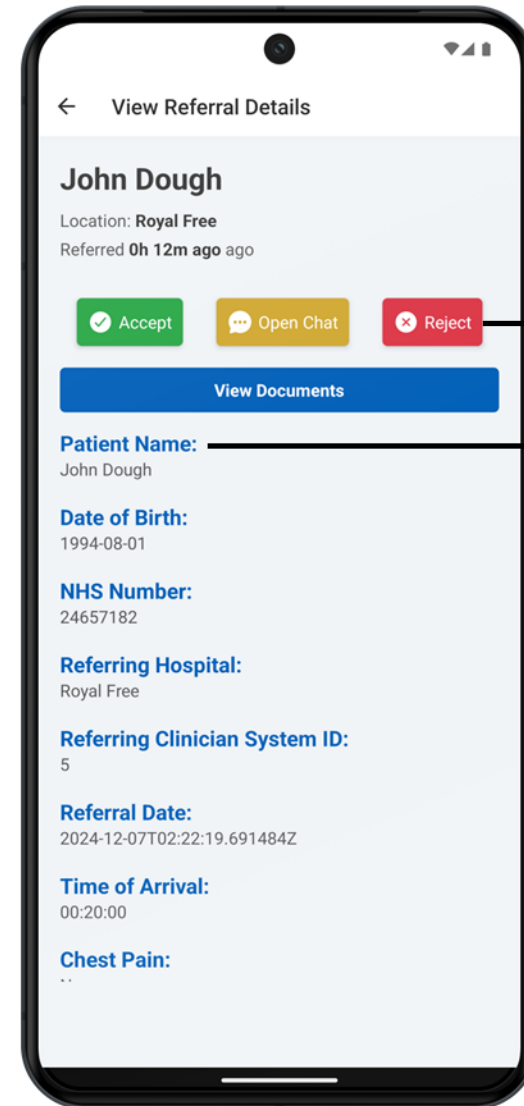
Modify surgery and bed availability at site.

New Requests to Review

List of new referrals are dynamically updated to be reviewed by surgeon.



Surgical Consultant's Home View



Review View for a New Referral

Accept/ Reject Referral

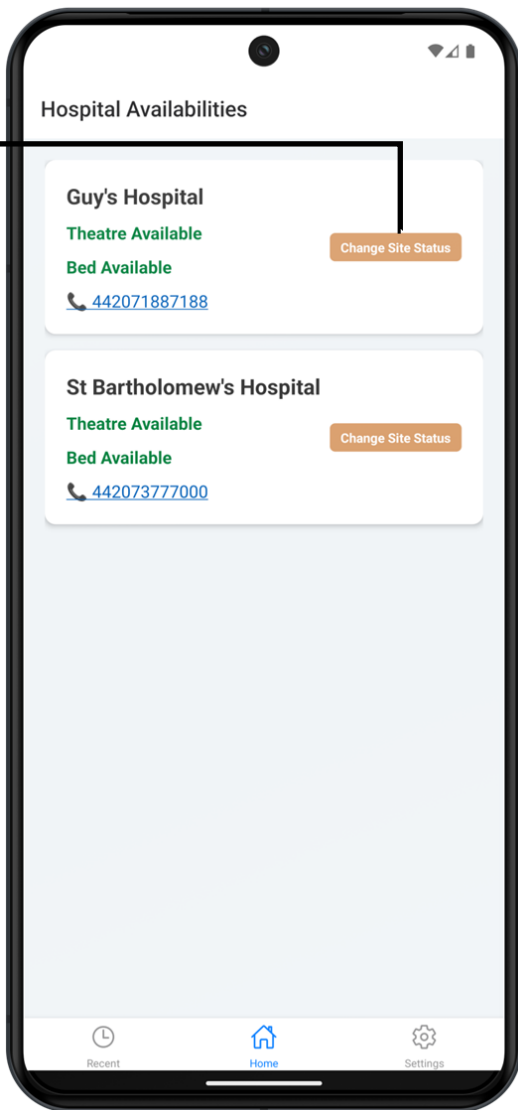
Surgeons can respond to new referrals and interact with A&E through Live Chat.

View Referral Details

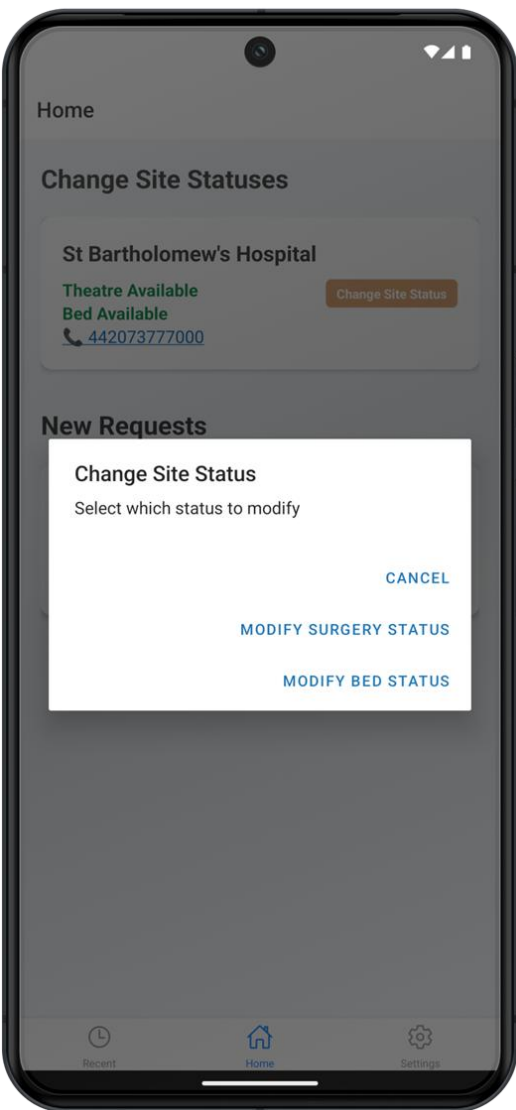
All information populated by referring A&E clinician is viewable including attached videos of imaging.

Site Manager

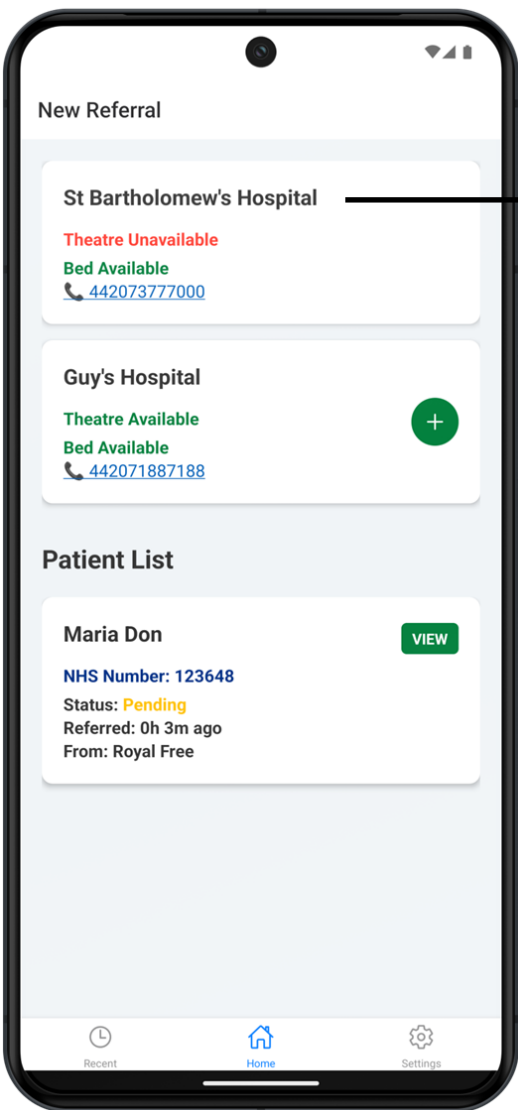
Change Site Status
Modify surgery and bed availability at all sites.



Site Manager's Home View



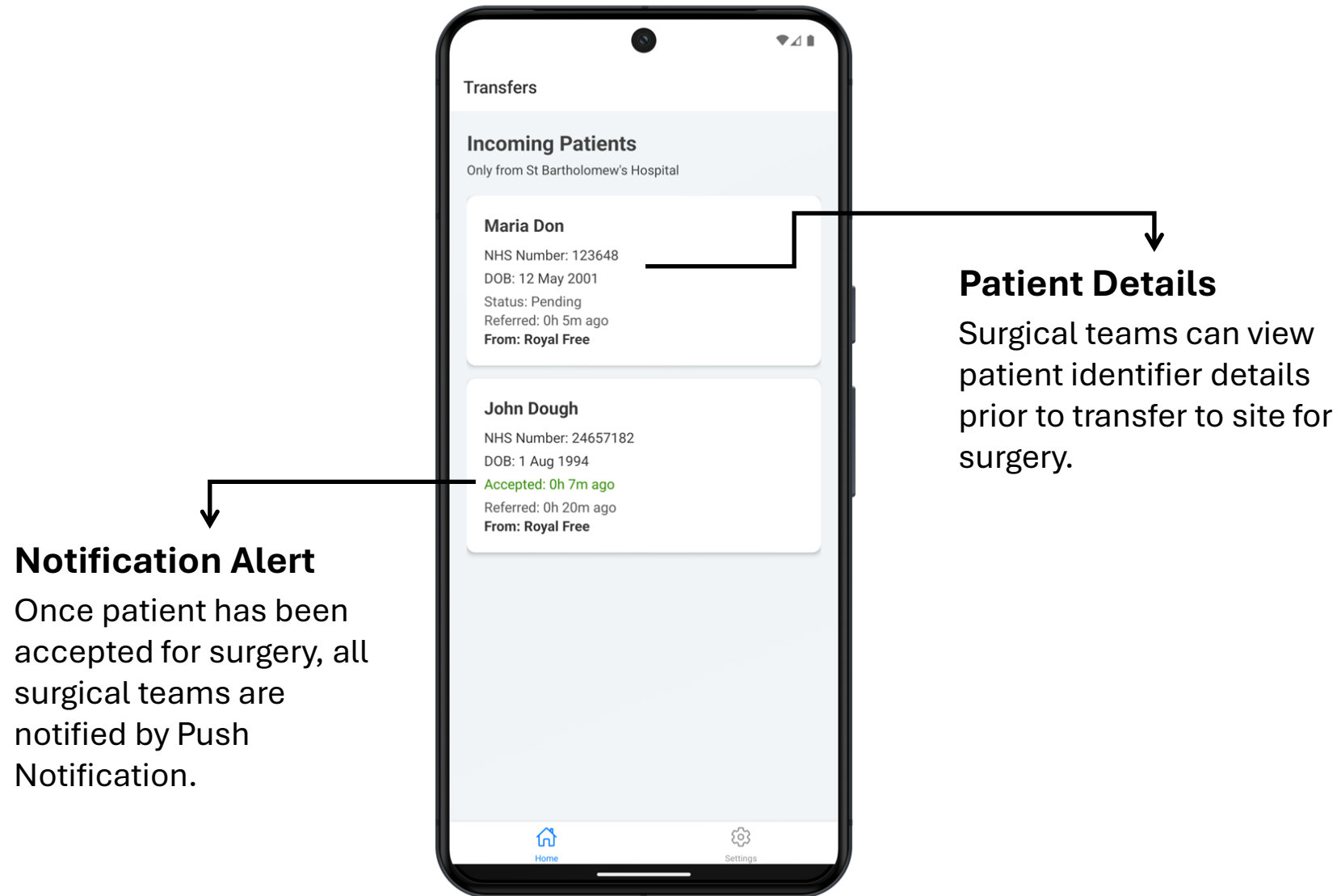
Modify a Site's Status from its Surgical or Bed Availability



A&E Doctor's Home View

Updated Site Availability
Available hospital for new referrals is automatically updated by change in site status

Perfusion, Anaesthetics & Theatre Teams



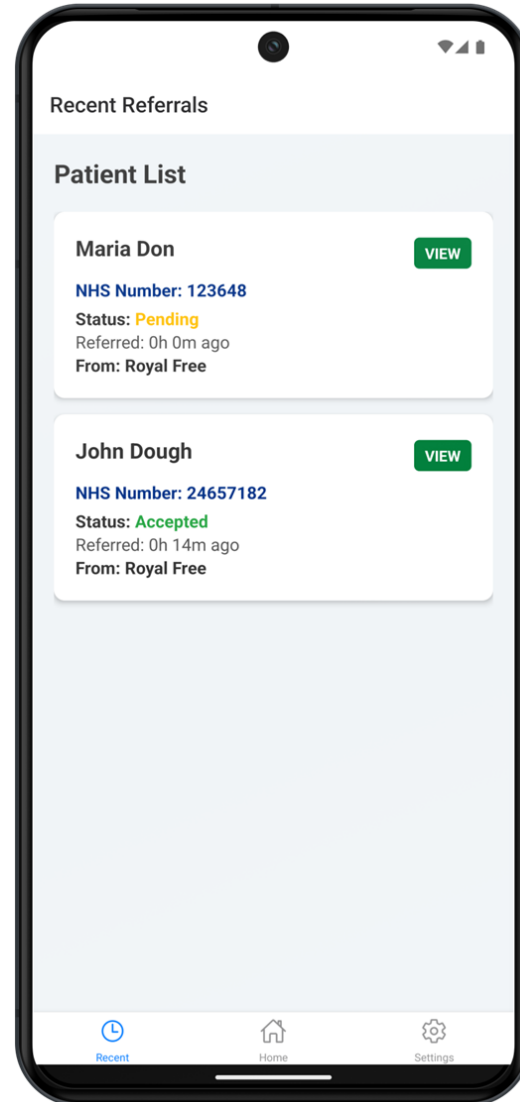
Patient Management - Live Chat

View All Referrals

All users able to view recent referral corresponding to their site

Three Tab Navigation

Home view dynamically includes only functionality relevant to the current user



Recent Referrals View



Live Chat for a Referral

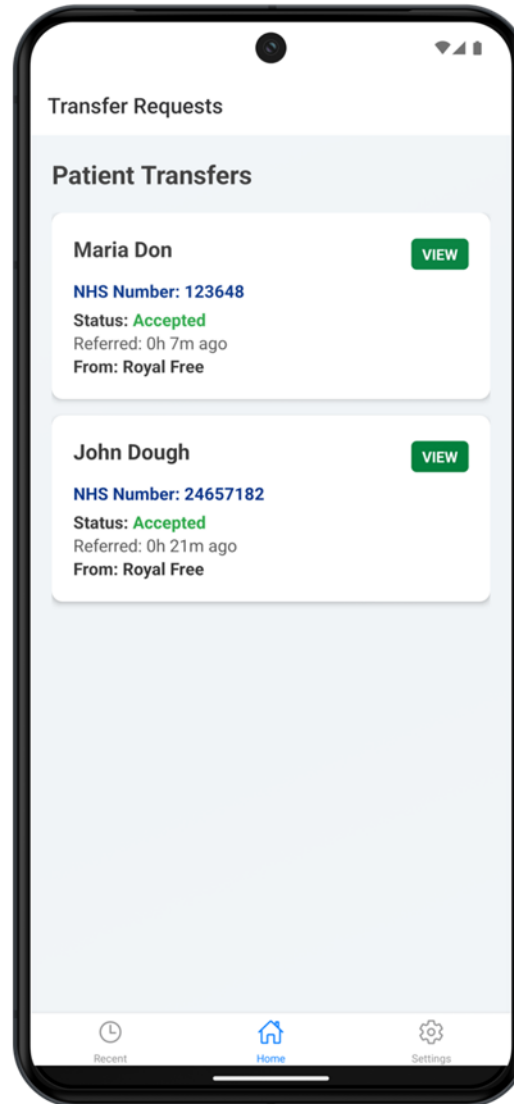
Live Chat

All users can update patient progress and resolve queries through integrated chat functionality within each referral.

Future Implementation: Ambulance Integration

View Pending Transfers

Once new referral accepted for surgery, ambulance teams can be notified for new transfer



Ambulance Team's Home View

Review Referral Details

Ambulance teams can view patient information populated by referring A&E clinicians

Update Transfer Status

Update once patient has been transferred to surgical site and a handover to the surgical team has been completed

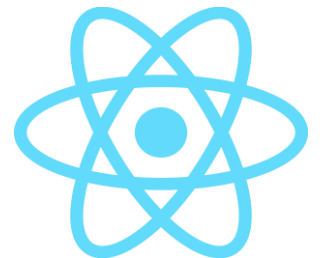
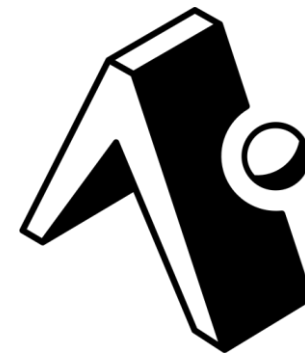
Frontend Development Approach

Expo Platform:

- Extends React Native - provides tools, services, and pre-configured native libraries

Key Benefits:

- Ease of Testing: Test applications in real-time across devices using Expo Go
- Developer-Friendly: Pre-built components, Allows development on Windows/Mac/Linux
- Cross-Platform Compatibility: Unified codebase for both **iOS** and **Android**



Backend Development Approach

Framework:

- Python Django framework
- A "batteries-included" framework – ORM, Authentication

Server:

- Uvicorn ASGI server to handle asynchronous communication

Database:

- SQLite for simplicity (Migrate to a secure DB later)

Communication:

- Backend communicates with the frontend via REST API and WebSockets

The Django logo, featuring the word "django" in a dark green, lowercase, sans-serif font.

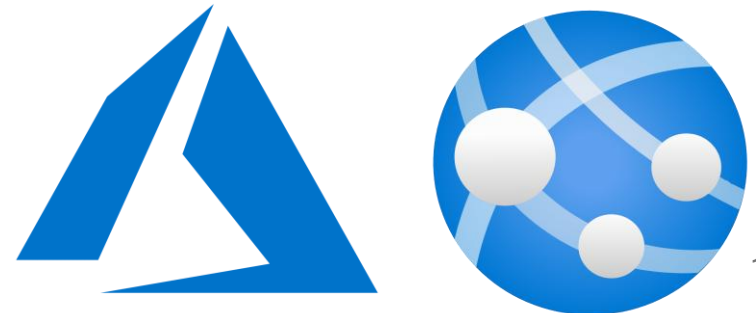
App Development Outlook

- **Live Chat for all Users**
 - Communication to include a variety of media formats
- **Further criteria for patient-specific diagnosis and action**
 - ECHO
 - Bloods
 - Blood Pressure
- **Multiple actionable Pathways**
 - Instructions to be locally admitted/discharged upon rejection
 - Local testing and monitored control upon rejection
- **Time sensitive data-collection for analysis and audit**
 - Currently exportable as a spreadsheet
 - To be linked with surgery data



Deployment

- **Login to require NHS Care Identity/Microsoft Outlook Login**
- **Production – ready database to be implemented for scale up**
 - PostgreSQL
 - MySQL
- **Cloud Service and loaders required for encrypted media and data collection**
- **API integration for Xcode and APK builds – amend/omit Expo features**
- **Load the final builds onto mobile app stores (iOS/Android)**



Future Steps

- **Proposal:**
 - Collaborative Steps to scale up
 - Implement the application into the NHS standardised procedures
 - Perform and audit hospital wide and trust wide pilot tests
 - Hospital staff training
- **Expandable to other surgical fields**

