# Sheffield Hallam University Knowledge Applied

## DEVELOPING A DIGITAL PREOPERATIVE ASSESSMENT PATHWAY AND CLINICAL DECISION SUPPORT

Sumayyah Saleem - BEng Software Engineering Sabiha Din - BSc Computer Science with Al Shelly Yang - BEng Software Engineering

### CLIENT'S BACKGROUND

The patients at AZ Hospital Trust each had 1 hour appointments which had led to a lengthy surgical waiting list, affecting their eligibility for surgery. Our client wanted a system to make this process more efficient in identifying patients who need early assessments. The hospital's POA process was previously inefficient as large amounts of time were dedicated to assessing patients who did not need the appointments. This system allows the Trust to efficiently decide which patients are eligible for surgery. This is done by patients answering the POA questionnaire through the system.

### STAKEHOLDERS

- 1) Admin user Sarah is the admin user, she monitors the whole system.
- 2) Doctors Will is the main doctor who can assign preoperative assignments to patients.
- 3) Patients Beth is one of the first patients to experience using the digital system.

### SOFTWARE CAPABILITIES

- Users' authentication and authorisation
- Creation of patients' and doctors' accounts by an admin user
- Admins update information on patients
- Doctors view patient records
- Doctors assign POAs to patients
- Patients view their profiles

Home Profile Appointments Notifications Log Out

Basic Details

Medical History

**Additional Details** 

vacy Policy Terms and Conditions About Us

**Pre-operative Assessment** 

• Patients complete POA questionnaires

## LEGAL, SOCIAL, ETHICAL & PROFESSIONAL ISSUES

- A legal issue related to copyright may arise as our preoperative assessment questionnaire is heavily inspired by the NHS's existing preoperative assessment. The use of copyrighted material without permission could violate The Copyright, Designs & Patents Act 1998, resulting in significant fines, the removal of the digital preoperative assessment, and other potential legal consequences.
- Our system could face issues with accessibility, a social concern that is critical to ensure all users including those with disabilities can use the website effectively. The website may be challenging for some users, for example users with visual impairments may find it difficult to interact with the system as there is insufficient support for them.
- The General Data Protection Regulation (GDPR) is an ethical issue that emphasises the importance of protecting individuals' personal data and privacy. The database for our system needs to be better protected as it contains information about our patients and highly sensitive medical information. Violating GDPR rules could result in personal information being accessed by unauthorised personal and loss of trust from users.



**Pre-operative Assessment** 







