Moorfields ITK Glaucoma App

1. Use Case Goals

Primary Goals

- To enable Consultants to operate virtual Glaucoma reviews of potential new Glaucoma patients through a community/primary care based electronic referral service.
- To accelerate the speed of initial Glaucoma assessment of candidate patients to more rapidly eliminate unnecessary patient referrals to Glaucoma clinics.
- To free up resources to manage the accelerated referral of newly diagnosed patients to clinic.

2. Use Case Story

Describe the ideal complete workflow from start to finish similar to a Pathway that the Application needs to enable and support including for each step data, capture, retrieval, presentation and functional user requirements. (add/remove workflow steps as required)

Use Case Component	**Description of How the Component Needs to Perform and interacts with other Components**
Expected Users	Consultant Ophthalmologists, Optometrists, GPs
Network Access & Security	• Must comply with NWIS security standards for handling, storing and moving patient identifiable data. • Pilot sites ideally to have secure WifI service connection to their networks that are connected to the Welsh N3 service. • Two factor authentication service may be required in the event the pilot sites do not have
Hosting	Must be hosted within N3 environment either via BPS N3 service or on OpenEyes service.
Application Distribution & Update	No firm requirements other than the process will need to be secure and not interrupt live operational services.
Workflow Step 1	• Patients attending selected optometric practices that have sufficient clinical features to warrant referral to the Hospital Eye Service will have their relevant clinical data entered in the IRIS system. • Optometrist conducting the assessment. Forename, Surname, DOB, Age, Gender, NHS Number , GP and address, Data: Visual acuity, Intraocular pressure (with method- GAT/ non-Contact) Checkbox: IOP only referral (if checked then IOP must be obtained by GAT) Clinical history (Ophthalmic)

	Relevant medical history NB medications are not required.
Workflow Step 2	Once clerked history taken this will allow user to access the fields/form to support the recording of specific test observations. The optometrist will conduct a series of tests and observations that will need recording in iRIS including: • Visual Acuity (Snellen only) • Tonometry (Pressures) GAT/non contact check box • Perimetry (Visual Field) to be acquired using iPad camera of visual field printout • Disk image: to be acquired from It is expected, where relevant, that drawing tools will be provided.
Workflow Step 3	The Visual Field tests will be photographed using the iPad / iPhone camera. A process will be applied to provide a check and verification that the VF test photographed belongs to the intended patient and matches the patent record into which it is being stored in iRIS. The VF test has meta data on it as a point of reference. Data extraction from image may require OCR facility (name and dob only)
Workflow Step 4	Disk images will be photographed using the iPad/iPhone camera A process will be applied to provide a check and verification that the Disk image photographed belongs to the intended patient and matches the patent record into which it is being stored in iRIS. The Disk image has meta data on it as a point of reference.
Workflow Step 5	A simple patient PROM with a limited list of questions
Workflow Step 6	Following verification all of the steps are completed the session is closed and the electronic referral is complete.
Workflow Step 7	• The Ophthalmologist will use the OpenEyes Glaucoma module to access the electronic referrals. The data captured from iRIS will be displayed in OpenEyes and enable the Ophthalmologist to form an initial diagnosis of Glaucoma. • The clinical decision taken by the Ophthalmologist is recorded in OpenEyes and a message of either a positive or negative diagnosis and associated explanatory notes / comments is recorded. The Ophthalmologist will also select an action for Optometrist from a drop down pick list of recommended actions based on the diagnosis.
Workflow Step 8	The optometrist will access iRIS to review the Ophthalmologists decisions and execute the selected actions confirming what actions have been taken.
Workflow Ends	
System integration/linking	• OpenEyes Glaucoma module interoperability so OPenEyes can receive the agreed structured message and content from BPS iRIS. • OpenEyes can send a message back to the relevant user about a patient which will be Glaucoma Y or N and associated descriptive / explanatory comments.
Reports	No report requirements for the ITK pilot

3. Known Constraints and Other Factors

Please list any known constraints or other factors that will or could affect how the Application and associated service will need to operate within your expected live operational environment.

Constraint / Other Factor	Expected / Potential Impact
OpenEyes Glaucoma module developer time	Could limit the available time to complete any required work on OpenEyes within the projects required timeline
Access to Welsh N3 from iPads not on the Welsh N3 network	NWIS do not currently permit access from mobile devices on commercial networks to connect to the Welsh N3 to send/receive patient data. Could prohibit use of IPads in practices that do not have appropriate WiFi services
Users do not have iPads	IPads or possibly iPhones will need to be provided to the meaningful use pilots.
iPads	iPads can/have been stolen so iPhones / iPads minis may prove to be more appropriate devices