

Digitalisation of Scottish Eyecare: Benefits to Patient care, Training and Education

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Aim

- The landscape of Eyecare has changed dramatically in the last few years.
- Diseases previously untreatable resulting in blindness, now have a window of opportunity where treatment preserves vision (eg: macular degeneration, vein occlusion).
- A solution was urgently needed to prioritise more ophthalmic patients.

Methods

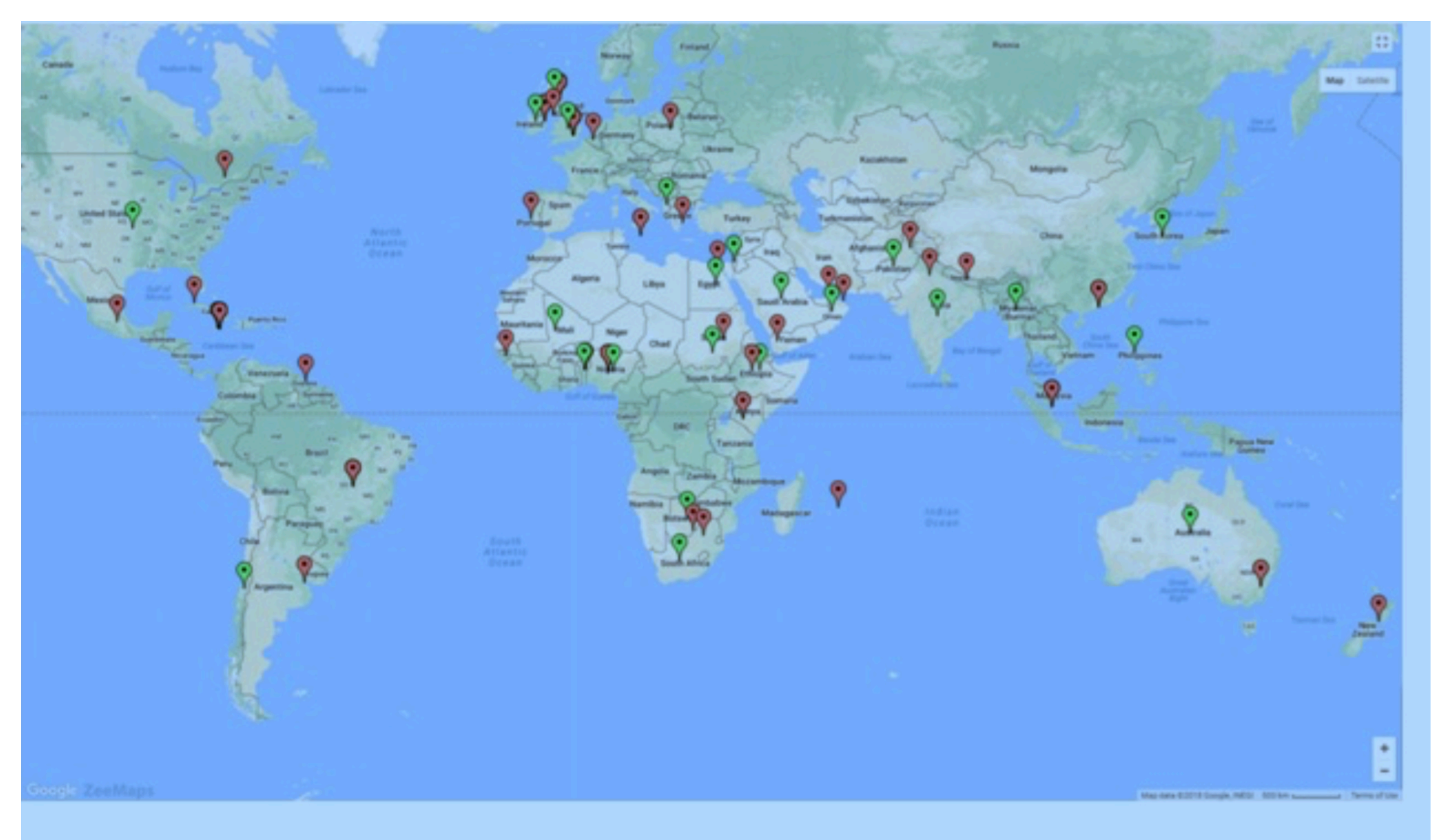
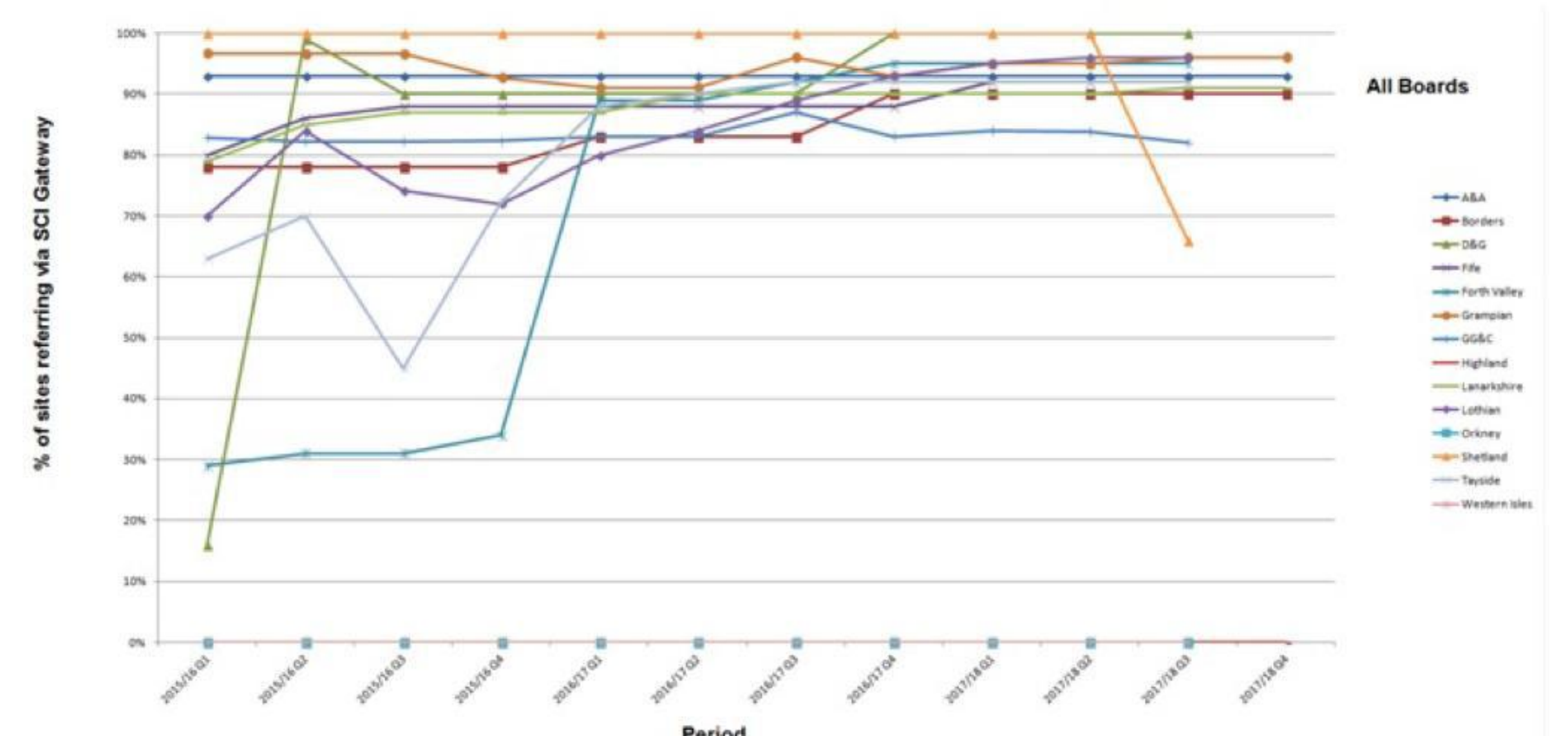
- A pilot study in Fife¹ showed that electronic referral from optometry to ophthalmology resulted in speedy process, reduced waiting times, prioritisation of urgent cases and retention of untreatable pathology in the community.
- Based on this study the Scottish Government passed a business case in 2012 to implement electronic referral with attached ophthalmic images and support information from primary to secondary eyecare.²

Outcome/Results

- Five years later a rate of 80-90% of electronic referral has been achieved across the fourteen Scottish health boards.
- The 54 paper referral methods have been amalgamated to five disease specific referral forms (cataract, glaucoma, macula, paediatric, general).
- Waiting times for Scottish eyecare have reduced from 6-9 months to 6-9 weeks.
- The images from the referral system were used to create ophthalmology virtual learning programmes through the University of Edinburgh for all professionals involved in eyecare.³
- Low risk ophthalmic patients (post-operative cataract care, ocular hypertension, keratitis, uveitis, corneal foreign body and abrasion) are looked after in the community by professionals many of whom are accredited by the University courses.
- The popularity of the programmes was such that a global network evolved with the courses now having graduates from over forty countries.

Rapid Access Referral Form (WET AMD ONLY)		Urgency of referral Urgent	
Patient Surname		Patient Forename	
DOB		CHI	
Address		SEX	
Postcode		Tel No	
Ethnicity		GOC Number	
Location Code		Date of Referral: 12-Sep-2018	
Armed Forces Personnel, Immediate families and veterans		Previous Attendance at HES	
		If Yes? Date	
		If Yes? Location	
		Translator Required	
		If Yes? Language	
Vision		Sph	
R		+3.50	
L		+5.00	
Cyl		-1.75	
Axis		140	
VA		6/36	
PH VA		2.50	
Add		2.50	
NVA		N14	
Applanation Tonometry		R 18	
Applanation No		L 18	
Date of Last Eye Test		Acuity at Last Eye Test	
27-Jun-2018		Right	
		Left	
Complaint/Symptoms		ADVANCED SCARRING AND AMD FROM 2013	
		DIFFICULTY WITH FACES/BLURRED VISION	
Duration of Visual Loss		1 WEEK	
Describe Findings		EXTENSIVE SCARRING	

GENERAL OPHTHALMIC SERVICES		Referral/Notification of Patient to GM	
PLEASE USE BLOCK CAPITALS EXCEPT FOR SIGNATURE		To: Dr.	
SECTION ONE: To Be Sent to GMP		PATIENT'S DETAILS	
SURNAME (Mr, Miss, Ms)		OTHER NAME(S)	
ADDRESS		POSTCODE	
TEL No.		Date of Birth	
PRESCRIPTION DETAILS FROM CURRENT SIGHT TEST DATE: 15/04/06		Previous corrected V.A.	
R 6/9 0.50 180 6/9 2.25 NS		Specify Cycloplegic/Mydriatic if used	
L 6/12 2.25 180 6/12 2.25 NS		Optic discs	
POINTS REQUIRING ATTENTION - FOR INFORMATION AND POSSIBLE REFERRAL:		0-3 SHALLOW	
SCOTTEN ONSET DOUBLE VISION SINCE 15/04/06		R 18mmHg	
- NEW CONSTANT DOUBLE VISION SINCE 15/04/06		L 15mmHg	
- TODAY RIGHT CONJUGATE STRABISMUS		Transmitter used	
- PRESENT HT DIST. (50 BASE OUT @ ON MADDOX 20)		Applanation/Tonometer	
- NO STRABISMUS AT NEAR		RUSAR 66	
- ALL REACTIONS + IOPs ARE NORMAL		Name and Address of Optometrist/GMP	
- NO HEADACHES/OTHER SYMPTOMS		Dr David and Alison	
- PLEASE REFER TO AN OPHTHALMOLOGIST IN NEXT 2-3 WEEKS. (I will arrange to see you)		1st Location Street	
THANKS		Edinburgh, EH1 1AA	
I agree/DO not agree that any Ophthalmologist to whom I am referred for medical consultation and/or treatment may make information relevant to my eye condition and its treatment available to my Optometrist / Ophthalmic Medical Practitioner.		Signed (Optometrist)	
Signed		Date 15/04/06	
SECTION TWO: To Be Completed By General Medical Practitioner (if not accompanied by formal referral letter)		Urgency Rating: Urgent/Sooner turn	
To: Dr / Mr / Mrs / Miss / Ms		Blood Pressure: mmHg	
RELEVANT CLINICAL HISTORY - INCLUDE MEDICAL/FAMILY/OPHTHALMIC AND DETAILS OF MEDICATION:		Ulinaptic	
		Provisional Diagnosis	
		Name and Address of GMP	
		Signed (GMP)	
		Date	



Conclusion

- Digitising ophthalmic services has enormous benefits to patient care, training and education. We discuss this redesign of Scottish eyecare services with national and international outcomes and results.



References

- Borooah S, Grant B, Blaikie A et al. Using electronic referral with digital imaging between primary and secondary ophthalmic services: a long term prospective analysis of regional service redesign. Eye (2013); 27 (3): 392-397.
- The Scottish Government. Eyecare integration project. Edinburgh 2014. 2014. <https://www.gov.scot/Topics/Health/Services/Eyecare/Integration> [accessed on 29/07/18].
- Tendo C, Johnson M, Hall N and Sanders R. A 21st Century eLearning Ophthalmic Experience. British Undergraduate Journal of Ophthalmology (2015); 3(1):1-3.